

NATIONAL ECONOMIC REVIEW

2014

GAP V Annual Growth Summit
Topic - Education

NSW Parliament House
Sydney, 18-19 September 2014





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EXECUTIVE SUMMARY

Education in Australia, from the importance of the early years to the Government's tertiary reforms and beyond, took center stage at the 5th *National Economic Review* held at NSW Parliament House on 18 and 19 September 2014.

Hosted by public policy think-tank Global Access Partners (GAP), the *National Economic Review* is an annual Summit designed to lead the debate on productivity, infrastructure, innovation, education, job creation and economic growth. Its parliamentary format encourages open and constructive dialogue and offers unique networking opportunities for its speakers, delegates and international guests.

Each Summit's theme is informed by the taskforces and stakeholder consultations run by GAP during the year:

- ▶ The 2010 Summit on **Innovation** called for a wider definition of growth and emphasised the benefits of new parameters to measure economic and social progress.
- ▶ The 2011 Summit on **Population** examined the impact and opportunities of Australia's predicted population growth.
- ▶ The 2012 Summit on **Productivity** focused on productivity, public value and leadership.
- ▶ The 2013 Summit on **Food** discussed the performance and potential of Australian agriculture in domestic and international markets.

The 2014 Summit on **Education** welcomed state and federal ministers, public policy makers, chief executives and leading academics to consider the state of education in Australia today and its importance to the future of the nation.

The programme included speeches by [the Hon. Andrew Roberts MP](#), Minister for Resources and Energy, NSW Government, [the Hon. Christopher Pyne MP](#), Minister for Education, Australian Government, and [the Hon. Philip Ruddock MP](#), Chief Government Whip.

The international guest speaker was [Dr Sergio Arzeni](#), Director of the Centre for Entrepreneurship, SMEs and Local Development at the Organisation for Economic Co-operation and Development (OECD).

Topics ranged from international competitiveness to deregulation and reform. Keynote presentations and blogs by Summit speakers and delegates are available at openforum.com.au/content/education.

Delegates also welcomed the official launch of the **Australian Society for Progress and Wellbeing** by its president, [Mr Andrew Gale](#). The Society will promote alternative methods of assessing individual and social wellbeing in the national debate. Its founding partners include the Chartered Accountants Australia and New Zealand (CAANZ) and the Australian Government Consultative Committee on Knowledge Capital (AGCCKC). The Society grew out of ideas aired in a speech by Professor Bob Cummins at the inaugural *National Economic Review 2010* and exemplifies the positive practical outcomes which GAP Summits generate.

SUMMARY OF THE EDUCATION DEBATE

- ▶ **Education is Australia's third largest export, worth over \$15 billion every year**, and is vital to domestic prosperity and wellbeing. Improved education and training from preschool to postgraduate levels will improve economic growth, social cohesion and personal outcomes.
- ▶ The NSW Government recognises the importance of education in improving competitiveness, while the OECD stresses ongoing human capital development. The Coalition's current higher education reform seeks to improve **the diversity, quality and economic sustainability of tertiary education in the face of increased international competition and changing labour market demands**.
- ▶ The acquisition of higher order skills improve an individual's employment and personal prospects, and Australia compares favorably to other OECD countries in terms of youth education and employment outcomes. However, **the nation's youth unemployment rates are increasing**. 11% of young Australians are out of education, employment or training, and regional disparities remain stark, with the Northern Territory and Tasmania ranking well below NSW and other states in academic attainment.
- ▶ University student numbers have trebled since the late 1980s, and growth is planned to continue. Universities moulded their provision to funding and legislation which promoted uniformity in the past and now acknowledge **the need for choice, specialisation and flexibility in the future**. Superfluous courses will tend to close as institutions concentrate on their strengths and reflect job market requirements more closely. New entrants will increase choice and competition and offer additional pathways into higher education.
- ▶ **Students will be empowered to make informed choices in a more competitive market**, while an expanded Commonwealth scholarship programme will allow talented students from disadvantaged backgrounds to choose the best courses in the country. The removal of fees and extension of loans to non-university tertiary providers will encourage ever broader access to higher education.
- ▶ **The environment and development of preschool age children are vital determinants of their future academic success and life prospects**. Children from disadvantaged backgrounds are more likely to start school unprepared for formal learning and tend to fall further behind despite the best efforts of their teachers. They are more likely to drop out in later years and suffer unemployment, welfare dependency, violence, mental health problems or commit crime.
- ▶ A school's academic record is often proportional to the wealth of its clientele or catchment area, but **all schools can improve their results through strong leadership and a positive learning culture**. Successful schools have a welcoming and predictable atmosphere with low staff turnover and minimal administrative interference in teaching time. They use evidence-based teaching methods and concentrate on learning rather than extraneous activities.
- ▶ **New mobile devices, online provision and educational apps can deliver learning experiences** and support for preschool children and their parents, virtual courses for students and simulator experience for professionals in health, the military and other sectors. However, the social and academic benefits of traditional education should not be underestimated and new technology should be seen as an addition to, not substitute for, traditional relationships and modes of learning.

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- ▶ Australian stakeholders and policy makers are committed to **the pursuit of excellence in Australian education**, realising its value in terms of international trade, domestic growth and citizen empowerment.
 - ▶ Knowledge, learning and skills development are important to both individual wellbeing and to society overall. **The Australian Society for Progress and Wellbeing** will campaign for the integration of broader measures of social and individual development into public policy decisions, beyond traditional financial indices such as gross domestic product (GDP). It will celebrate and promote successful local wellbeing initiatives and help disseminate best practice around the country.
 - ▶ Incentives must be considered to encourage different jurisdictions to create networks of early learning centres and schools to share ideas and improve practice.
 - ▶ Doveton College in the south eastern suburbs of Melbourne offers an innovative integrated approach to supporting the health, development and learning of its children and their families. Its proven model of service delivery can be replicated across Australia.
 - ▶ The business community must adopt child-friendly policies and offer early years' education to the children of its employees.
 - ▶ Policy reforms should maintain the balance between encouraging female workplace participation and nurturing early learning environments for their children.
 - ▶ Society must fund early learning today or pay a much greater price tomorrow. The evidence suggests it cannot afford not to pay for early years' education.

KEY RECOMMENDATIONS

Early Childhood Education

- ▶ Childcare must be reframed as early years' education and investment made to improve its quality, access and cost relief to make it a universal platform for all children.
- ▶ A whole-of-government approach should invest in the early years to strengthen the education and health of the young citizens on which the nation's future prosperity will depend.
- ▶ Academic attention and a drive for excellence in education must be targeted at the first five years of a child's life. The most experienced, highly qualified and best paid teachers should be working with preschoolers, as these years are the most vital for educational outcomes overall.

Preschool, Primary & Secondary Education

- ▶ Sydney's population growth is increasing pressure on its schools and parents. Local government must incorporate new and expanded educational institutions in its plans to reduce waiting lists and ease congestion.
- ▶ Principals should be given more authority to select their own staff, run their own affairs and drive positive learning cultures in their schools.
- ▶ A range of strategies can improve high school results, including strong and empowered leadership, a reduction in unnecessary administration, a focus on evidence-based teaching, the building of a positive learning culture and the recruitment of dedicated staff.

- ▶ A more rational approach to education management is required, and the best teachers should be paid more for their efforts, rather than promoted away from the classroom into administrative roles.
- ▶ Student teachers should have more rigorous field preparation in disadvantaged schools to reduce attrition rates at the start of their careers.
- ▶ Preschool education should be expanded to prepare children from disadvantaged backgrounds for school and later life. More resources and higher status for the preschool sector would help all Australian children have a better chance to attain their potential in life.
- ▶ Institutions such as Doveton College which are integrating education, health and family support services can improve social outcomes in areas of high deprivation and special needs. Timely intervention and targeted support for refugee children has raised their aspirations and increased the numbers attending university.
- ▶ Standards of mathematics and written English must be improved and enrolments in science, technology and mathematics encouraged in high school.
- ▶ Coding, as well as the use of computers, should be encouraged at schools from an early age.
- ▶ The teaching of second and third languages in Australian schools has declined and needs to be reinvigorated. Australian children should be taught foreign languages as early as possible, as the ability to absorb a new language quickly diminishes with age.
- ▶ Schools need to encourage children's artistic creativity as well as maths and languages.
- ▶ More effective measures of school performance are required.

Vocational Training

- ▶ Australia could learn from the delivery of apprenticeships in other countries. Fifty per cent of Australia's apprentices fail to finish their course, while a greater focus on the student experience and status awards encourages a completion rate of 87% in Germany.
- ▶ Training which builds character, instills work ethic and emphasises teamwork as well as individual technical skills could benefit young Australians in civilian life as well as the military.

Tertiary Education

- ▶ Australian education should embrace excellence, rather than pursue uniformity, and institutions should offer a more flexible range of courses tailored to job market and international conditions.
- ▶ Australia should benchmark itself against the best, rather than the average, and look at both abroad and domestic 'pockets of excellence'.
- ▶ To stay globally competitive, universities need internal reforms and the reassessment of their priorities. They should publish annual targets and performance reviews of their teaching, research and administrative efficiency to offer comparisons with their overseas competitors.
- ▶ Deregulation must promote competition, as well as transparency in universities. Remuneration of vice chancellors should be tied to the universities' key performance indicators (KPIs) to encourage performance, and published in annual reports.
- ▶ Enrolments in science, technology, engineering and mathematics (STEM) must be encouraged to ensure graduates have the skills which modern growth industries demand.¹

- ▶ Australia should encourage graduates to become entrepreneurs. Entrepreneurial skills should be taught in universities alongside professional qualifications to encourage start-ups and a more commercial mindset.
- ▶ In addition to the job-specific skills demanded by employers, education should equip people with the broad generic skills they will need to adapt to change over the medium term.
- ▶ The practical benefits of research should inform the awarding of research and development (R&D) grants to a greater extent. The amount of paperwork required to gain funding should also be streamlined.
- ▶ The tertiary sector should strengthen its academic reputation, provide more accommodation support and encourage entrepreneurship to maintain its attractiveness to overseas students.
- ▶ Australian universities can partner at home and abroad to offer massive open online courses (MOOCs) and compete more rigorously to drive up standards.
- ▶ A culture of excellence needs to be fostered in all universities. The interaction of different disciplines within a university encourages the innovation and creativity modern societies require.

Professional Development & Continuous Learning

- ▶ Professional development should be encouraged for all workers, given today's rapid obsolescence of skills.
- ▶ Measures to extend and modernise the abilities of Australians working for small to medium-sized enterprises (SMEs) are required, as smaller firms often lack the resources, time or motivation to maintain their staff's professional development, and

personal skills are rapidly rendered out-of-date in the fast-moving modern economy.

- ▶ Australia should recognise the educational needs and potential of senior citizens. Australia's growing number of older people creates both a market and resource, while a broader emphasis on lifelong learning would not only benefit adults but support the education of the young.

University & Business Partnerships

- ▶ Cooperation between the business and university sector must be extended to generate a range of mutual benefits.
- ▶ Universities should support local economic development to justify their public subsidy. Groups such as the Australian Chambers of Commerce could play a pivotal role in improving links between universities and small businesses in their region.
- ▶ Australia must do more to support its start-ups, and universities could be asked to play a larger role in this sector.

Role of Technology

- ▶ Technology will be the most significant transformational trend in all sectors, while innovation management and culture are considered to be the biggest challenge of the decade.
- ▶ The delivery of education can be facilitated through the use of a wide range of platforms including smartphones and tablets.
- ▶ Policy makers and educators should embrace the potential of new technology in education as well as health and other sectors and incorporate it in kindergartens, schools and universities. However, technology is no



substitute for real human interaction and face-to-face learning.

Measures of Progress

- ▶ There should be greater use of holistic indices of improvement and value in education, childcare and related issues.

Governance & Policy Development

- ▶ Consideration of the Commonwealth's role in education and the expansion of federal powers in education should be included in the forthcoming review of Australia's constitutional arrangements (White Paper on the Reform of the Federation).
- ▶ The Australian Government needs to agree bipartisan goals for digital development which survive the electoral cycle. Australia is falling behind in the wider digital economy, and its national plan for digital development needs improvement.
- ▶ The Government should work with the OECD to open a new OECD hub for the Asian region in Sydney, Melbourne or Adelaide.
- ▶ GAP should create a new taskforce on education to continue the Summit's discussions and produce practical solutions for early, secondary and tertiary education in 2015.

THE SUMMIT'S OUTCOMES AND PROJECTS

GAP will coordinate several projects to ensure the Summit's long-term impact on public policy. These include facilitated stakeholder engagement, online discussions through Open Forum and further consultations and research.

► GAP Taskforce on Education (Early Childhood, Primary and Secondary)

GAP will facilitate a **two-year multidisciplinary taskforce** to develop ideas and recommendations stemming from the 2014 Summit. The group will discuss early childhood, primary and secondary education and articulate practical solutions to issues the event raised. The Taskforce will meet at least once per quarter, produce a comprehensive report of its deliberations and host a conference to present its findings.

► GAP Taskforce on Leadership in Education

This Taskforce was established in 2013 to address the challenges facing Australia's higher education sector and will continue its work into 2015. It serves as an informal advisory body to both the Minister for Education and the Department of Education. The deliberations of this Taskforce have informed the Government's current reforms. The group's 26 members include vice-chancellors, leading academics, businesspeople and senior public servants. The Taskforce is chaired by Mr Stephen Hayes MBE. A paper on '**Benchmarking innovation for the future of tertiary education**' will outline how new digital strategies can help Australian institutions compete.

► New University Model

This project will focus on modern methods of education delivery to improve content flexibility, student accessibility and job market relevance.

It will develop the economic case for a **new type of higher education provider** to deliver high-quality, individually customised learning programs through a blend of traditional and online teaching, perhaps in partnership with an established university.

► GAP Institute for Active Policy

GAP continues to develop **an Institute for Active Policy**, an independent organisation supporting evidence-based policy-making. Utilising the '*Second Track*' process, the Institute will improve and accelerate political decision making by creating sustainable networks of stakeholders in government, the public service, business and civil society. These networks will facilitate cross-disciplinary and collaborative approaches to the many regulatory challenges facing Australia.

GAP will report on the outcomes of these and other projects at the 6th *National Economic Review*, planned for 17 and 18 September 2015 in Sydney.

► 2015 Growth Summit on Employment

The 2015 Summit will discuss **Employment** and the future of jobs in advanced economies. The event will consider the current trends and disruptions shaping the future of jobs and skills and identify the challenges and opportunities facing individuals, employers, education providers and policy makers. The work of **the GAP Taskforce on Productive Ageing**, an advisory body established in 2014, will inform the planning and content of the 2015 Summit, given Australia's changing demographic profile.

GAP welcomes partnership proposals from interested organisations and individuals.



PARTNERS & SPONSORS

National Economic Review 2014 was organised by Global Access Partners Pty Ltd (GAP) – a not-for-profit public policy network which initiates high-level discussions on the most pressing social, economic and structural issues and challenges across a broad range of Australian economic sectors.

Through its pioneering '*Second Track*' Process programme of initiatives, GAP seeks to foster links between community, government and academia to streamline the process of 'fast-tracking' solutions to key issues, increase stakeholder participation in policy formation and decision making, and develop novel, cross-disciplinary approaches to regulatory problems by engaging key stakeholders in discussions and research.

As with the previous four Summits, *National Economic Review 2014* was hosted by **the Hon. Anthony Roberts**, NSW Minister for Resources and Energy, in the historic NSW Parliament House, Australia's oldest legislature, dating back to 1824.

The Summit was co-sponsored by **GAP's partners** whose role extends beyond the event through membership in the national consultative committees and advisory bodies facilitated by GAP. Our thanks go to the following organisations for their contribution and foresight in supporting the development of the Education Summit:

- **Australian Centre for Health Research**
- **Department of Education, Australian Government**
- **Chartered Accountants Australia & New Zealand (CAANZ)**
- **Cognizant Technology Solutions**
- **Edith Cowan University**
- **ECU-Emirates Centre of Aviation & Security Studies (CASS) in Dubai**
- **Hewlett-Packard Australia**
- **Herbert Smith Freehills**
- **Open Forum**

(for more information on the sponsors and partners, see App. 3, pp. 70-79)



KEYNOTE SPEAKERS

National Economic Review 2014 was held in the Macquarie Room of the NSW Parliament House. **Opening Dinner** on 18 September and the **Plenary Sessions** on 19 September were structured under the following headings:

- **Opening Dinner**
"From skills to employment in Australia: An OECD perspective"
- **Session One**
"Excellence in Education: How can Australian education be globally competitive?"
- **Session Two**
"Australian education in the context of a deregulatory government"
- **Lunch Session**
"Digital disruption's impact on education"

Each session began with thought provoking addresses from the keynote speakers, followed by a dialogue between delegates in a parliamentary style (*for a full programme, see App. 1, pp. 60-61*).

The keynote speakers and session chairs of *National Economic Review 2014* were (*in alphabetical order; for speakers' profiles, see App. 2, pp. 62-69*):

Dr Sergio Arzeni
Director, Centre for Entrepreneurship, SMEs and Local Development, OECD
Head of Programme, Local Economic and Employment Development (LEED)

Prof Stephen Burdon
Professor, Faculty of Engineering & Information Technology
University of Technology, Sydney (UTS)

Prof Peter Brooks AM
Professorial Fellow,
Centre for Health Policy,
School of Population & Global Health
University of Melbourne

Mr Alan Castleman
Chairman
Australian Centre for Health Research
Ms Catherine Fritz-Kalish
Managing Director
Global Access Partners

Mr Andrew Gale

President
Australian Society for Progress & Wellbeing

RADM (Ret.) James Goldrick AO, CSC

Adjunct Professor
School of Humanities & Social Sciences
University of New South Wales (UNSW)

Mr Robert Griew

Associate Secretary
Higher Education, Research & International
Department of Education
Australian Government

Mr Stephen Hayes MBE

Chair, GAP Taskforce on Leadership in Education
Managing Director, Complexity Solutions
Chief Executive, Think2Impact

Ms June McLoughlin

Director, Family & Children's Services
Doveton College

Ms Lisa Middlebrook

Executive Manager
GAP Growth Summits

Prof Frank Oberklaid

Founding Director
Centre for Community Child Health
The Royal Children's Hospital
Melbourne

The Hon. Christopher Pyne MP

Leader of the House
Minister for Education
Australian Government

The Hon. Anthony Roberts MP

Minister for Resources & Energy
Special Minister of State
NSW Government

The Hon. Philip Ruddock MP

Chief Government Whip
Australian Government

Mr Rob Ward AM

Head of Leadership & Advocacy
Chartered Accountants Australia & New Zealand

Ms Suzette Young

Principal Emeritus
Willoughby Girls High School



REPORT OF PROCEEDINGS

DAY ONE - Thursday, 18 September 2014

The key points made by each speaker are outlined below. Full transcriptions of the speeches are available on request from GAP.

OPENING DINNER

Ms Lisa Middlebrook

**Executive Manager
GAP Growth Summits**

Lisa Middlebrook welcomed attendees to the Opening Dinner. She thanked the Summit's sponsors and outlined Global Access Partners' work as a public policy network, through which experts and stakeholders can discuss pressing issues, produce innovative ideas and develop commercial solutions.



Drawing from personal and family experience, she argued that Sydney's high schools lack the wide range of high-quality courses and sporting facilities enjoyed by their public counterparts in the United States. Some economically advantaged suburbs of

Sydney lack a public high school and many areas have long waiting lists. She challenged dinner guests to encourage community support for education. She then introduced the Hon. Anthony Roberts, NSW Minister for Resources and Energy and Leader of the House, to deliver the welcome address.

WELCOME ADDRESS

The Hon. Anthony Roberts MP Minister for Resources and Energy NSW Government

Minister Roberts welcomed colleagues, international guests and attendees to the nation's oldest legislature, dating back to 1824. The building of the NSW Parliament was Australia's first public-private partnership and, like many since, has seen its share of problems.

In response to Ms Middlebrook's opening remarks, the Minister reflected on the growing population of his Lane Cove constituency which is now putting pressure on its schools, although the sale of Hunter's Hill High School was once proposed for want of pupils. Every school has a waiting list, and new buildings are replacing mobile classrooms. While the Government is aware of the problem, individual planning decisions can still allow the development of new housing without building the new schools required.

Minister Roberts praised the NSW Government's education reforms and record of economic growth. The State's greatest asset remains its citizens, and education is the key to future international competitiveness. To avoid becoming 'a nation of miners and social workers', Australia's children must



"New South Wales' greatest asset remains its citizens, and education is the key to future international competitiveness. To avoid becoming 'a nation of miners and social workers', Australia's children must be educated properly."

- The Hon. Anthony Roberts MP -

be educated properly. Parents agonise over where to send their children to school, but all schools seem to have waiting lists, not just elite private institutions. Parents can prove harder work for teachers than their children, if their expectations of academic success are beyond their children's capabilities.

The Minister apologised for the unavailability of the Legislative Chamber, thanked his outgoing chief of staff, Mr Tim James, for his service and paid tribute to the contributions of Global Access Partners and Mr Peter Fritz AM to public policy debate.

Lisa Middlebrook thanked members of the Summit's Steering Committee and the staff at GAP for organising the event and introduced Mr Rob Ward AM to the stage.

Rob Ward, Head of Leadership and Advocacy, CAANZ, outlined the importance of the education debate and flagged the forthcoming launch of the Australian Society for Progress and Wellbeing. Introducing the Summit's international guest speaker Dr Sergio Arzeni, he stressed the importance of small business innovation to the Australian economy.

INTERNATIONAL GUEST SPEAKER

*"From skills to employment in Australia:
An OECD perspective"*

Dr Sergio Arzeni

**Director, Centre for Entrepreneurship,
SMEs and Local Development, OECD
Head of Programme, Local Economic and
Employment Development (LEED)**

Dr Arzeni outlined the role of the OECD in defending the market economy against the dead hand of the command economy. After the collapse of European communism in 1989, the OECD strove to make capitalism more ethical, the market more transparent and development more sustainable — ambitions it shares with GAP.

The OECD is implementing a skills strategy to improve human capital as the competitiveness of every country is a product of its workers' competence. OECD research proves that higher-order skills secure better employment and improve economic and social outcomes. Although the Australian education system has been criticised, Dr Arzeni urged Australians to be proud of their schools: OECD studies show Australians rank comparatively highly in terms of international skills.



Unfortunately, Australia also suffers significant **youth unemployment**, with July 2014's figures showing a rate of 14%. Although this is below the OECD average of 16%, Germany, Austria, Switzerland and the Netherlands suffer just 4 - 6%. 11% of young Australians are not in education, employment or training, and their number is increasing.

Although progress has been made, pressing problems remain. The OECD's Programme for International Student Assessment (PISA) study² shows that the Northern Territory and Tasmania rank well below NSW and other states in educational attainment. This is a common phenomenon around the world, with disparities within countries often greater than the disparities between them. Indigenous youth suffer unemployment rates three times higher than other Australians.

Half of Australia's apprentices drop out before finishing their course, compared with 87% in Germany, for example. Germany focuses on the student experience pre and post apprenticeship, as well as during the course itself. The training involves supplements which help participants advance to the grades of master craftsman, technician or business administrator, boosting their job prospects as well as motivation and self-esteem. Bestowing dignity to these courses, regardless of their nature, instils a professional attitude to every subsequent job and helps explain why German products and services enjoy such a high reputation.

Measures to improve and modernise the skills of SME employees are required as smaller firms often lack the resources, time or motivation to maintain their staff's professional development. In the past, it was possible to base an entire career on a single period of study, but the rapid obsolescence of knowledge is a defining feature of modern society. Large companies can organise lifelong learning and in-house training, and local public-private systems

must facilitate training for other employees. Although some schemes are already underway, universities must be challenged to fully embrace this field. In many OECD nations, particularly in Scandinavia, universities are expected to support local economic development, as well as teach and research to justify their public subsidy. Although some Australian universities have engaged with major companies such as Hewlett-Packard, they have not forged similar links with small businesses. Representative groups such as the Australian Chamber of Commerce and Industry could play a pivotal role in improving links between universities and small business in their region.

Skilled immigration should also be encouraged, as human capital attracts foreign investment, rather than vice versa as is often assumed. The retention and attraction of talent is central to the success of modern knowledge economy. 14% of high-tech companies in Silicon Valley were created by foreign workers originally employed under H-1B visas³ which allow the employment of skilled workers from abroad in specialist technological and other occupations. This has increased competition, encouraged innovation and attracted further talent and investment into the American technology sector.

There are 4.5 million international students in the world today, and Australia has 6% of the global market. One in five tertiary students in Australia is from abroad, the highest proportion on the planet. One of three students involved in advanced research is also from overseas. They have often been seen as 'lucrative overseas students', subsidising the costs of the institutions they attend, but Australia is facing increased competition for their custom and is no longer a low-cost option, given the high value of the dollar and inflated property prices. The educational reputation of Australian universities must be strengthened with the attraction of first-class professors to encourage more foreign students to these shores. Universities must do more to organise



"Sparks of creativity emerge from the mix and clash of Australia's different sectors and cultures, but the teaching of second and third languages in Australian schools has declined. Learning other languages opens children's minds to the world and encourages their interaction in today's globalised world."

- Dr Sergio Arzeni, OECD -



appropriate lodging for international students and offer support for entrepreneurs. In partnership with the European Commission, the OCED has launched a programme to encourage entrepreneurship in European universities, and Australia should follow suit.

Australia is a country of immigrants, and an ever wider range of migrants continues to enrich the nation's culture and drive innovation in the new knowledge economy. Sparks of creativity emerge from the mix and clash of different sectors and cultures, but **the teaching of second and third languages in Australian schools has declined**. Learning other languages opens children's minds to the world and encourages their interaction in today's globalised world. Companies are more likely to find success abroad if they at least attempt to communicate in their customer's native tongue.

The OECD is reaching out to the South East Asian region and its Secretary General opened the First South East Asia Forum in Bali in March 2013. Distance from its main centre of operations remains a problem, but a new OECD hub could be created in the region. Sydney would be a likely candidate, as it is a magnet for regional activity, and a new University of Technology Sydney (UTS) campus is being built to bring academics and students from different disciplines under the same roof.

A similar approach at the Ben-Gurion University of the Negev has helped Israel become one of the most creative and innovative countries in the world. This country of just 7 million has more technology companies listed on the NASDAQ than the whole of Europe. Universities in Australia and around the world must become sources of creativity, rather than remain diploma factories.

GAP brings people from diverse disciplines together to think and act on critical issues, and the OECD is interested in taking the GAP concept to Europe.

Dr Arzeni then took questions from the floor. Several participants suggested alternative locations to Sydney for an OECD hub, including Adelaide and Melbourne, given recent improvements in transportation and connectivity.

One attendee flagged a YouTube video entitled *Humans need not apply*⁴ which argues that a fifth of jobs will be replaced by machines in the next two decades. Skilled professions such as accountancy will be transformed in the near future, just as manufacturing was in the recent past.

Dr Arzeni revealed that the OECD had no plans to model such developments as predictions are usually doomed to failure. In the early 1990s, for example, Jacques Delors set up a think tank in Europe to pick

the ‘jobs of the future’. They identified 17 types of employment – none of which included or became as important as the call centres which created over two million jobs in the late 1990s. Given the difficulty of predicting the specific skills and job requirements of the future, **education should equip people with the broad generic skills they will need to adapt to change.** Employers often argue for the teaching of job specific skills, but soon bemoan the inability of such employees to adapt to evolving or increasing requirements.

Low youth unemployment in the Netherlands results in part from 65% of under 14 year olds working or volunteering during school holidays. Such experience improves their employability when leaving school through instilling reliability, punctuality, discipline and a respect for their superiors which may be lacking at school. Many Australian companies are reluctant to take interns as employers worry young people will question the need for every task, instead of actually completing it.

There can be disparity between what students think will improve their job prospects and what employers actually prefer. More study does not necessarily equate to greater employability. The Milan Chamber of Commerce, for example, found that 80% of companies they surveyed preferred students who had completed a three-year degree over those who had studied for five years, as such graduates were deemed ‘pretentious’ and demanded higher pay. He reiterated that students cannot learn job-specific skills at university, but must gain useful generic skills applicable to all situations.

Another delegate underscored the benefits accrued by Australia through overseas students and skilled immigration. He called for Australia to set its sights much higher than ‘the average’, and the increased productivity of a highly skilled workforce should more than compensate for the higher wages they command. He argued that the price inelasticity of

labour created by unions was hampering economic development.

Dr Arzeni saw wage negotiations as a broader issue involving the social structures of industrial relations. Many countries with high wages are also very successful. Germany enjoyed a €100 billion surplus in the first six months of 2014 through the excellent skills and productivity of its workforce. German companies and workforces have reaped the benefit of wage flexibility over the economic cycle. Volkswagen is paying a €7,000 bonus to its employees for the second year running, a decade after it asked them to take a cut in pay.

There is a need to foster ‘the art of working’ in young people, rather than teach specific job skills, and such an approach could offer Australia an advantage over its competitors, said Dr Arzeni in conclusion.



Mr Rob Ward AM
Head of Leadership & Advocacy, CAANZ

Rob Ward introduced *Is Policy Making Measuring Up?*⁵, a new report by CAANZ challenging the traditional presumption that GDP is the sole way to assess national progress. GDP fails to account for non-financial, but equally important, questions of national and personal security, environmental and educational standards, or trust in the leadership of the nation.



"Just as global warming was seen as a fringe concern 25 years ago, but has now become part of the political mainstream, so progress and wellbeing should move up the political agenda."

- Mr Andrew Gale -

He then invited Mr Andrew Gale to formally launch the Australian Society for Progress and Wellbeing⁶ — a new member-based organisation through which like-minded people can champion the concepts of progress and wellbeing.

**Mr Andrew Gale
President
Australian Society for Progress & Wellbeing**

Mr Gale offered the Society's formation as proof of the positive outcomes GAP conferences can produce. An address by Prof Bob Cummins at the inaugural Summit in 2010 on broader measures of economic and social progress precipitated the formation of a GAP taskforce on this issue, chaired by Stephen Bartos, which in turn created the Society to campaign for increased attention to wellbeing.

Formally constituted in November 2013, the Society has three broad objectives:

- Ensure wellbeing receives prominence in determining the progress of Australia and Australians – at an individual, family, community, business and government level;
- Shift social progress and wellbeing considerations from government departments, supra-national organisations and academia into ‘mainstream’ consciousness and decision making;

- Build an influence bridge between the designers of progress and wellbeing frameworks and users of those frameworks, especially major decision makers in government, public policy, corporations and significant not-for-profit organisations.

Governments, companies and families tend to use financial indices to measure success, but important as these are, there are a host of other, if more intangible, assets in society. Education, freedom, health, the environment and relationships affect people’s lives just as profoundly and, if measured robustly, can be assessed and encouraged. Concepts of wellbeing should become integral to the thinking of everyone, from individuals to international organisations. Education, knowledge and human capital will all play a vital role.

The Australian Society for Progress and Wellbeing will be owned and led by its members working through their personal and professional networks to further its aims. Just as global warming was seen as a fringe concern 25 years ago, but has become part of the political mainstream, so progress and wellbeing should move up the political agenda.

The GAP Taskforce on Progress in Society initially assumed a need to create a new wellbeing measurement framework, but its discussions highlighted a plethora of high-quality solutions already in existence, including the Measuring

Australia's Progress (MAP)⁷ produced by the Australian Bureau of Statistics. The Society therefore aims to promote the use of existing indices, rather than the creation of new ones.

After consideration of the merits of both top-down and grassroots approaches, the Society will prioritise the latter by **connecting communities**. It will celebrate, promote and replicate successful local wellbeing initiatives and produce methodologies to maximise their impact. There are at least 50 mental health initiatives in Australia, for example, and connecting these would have a significant effect.

As an example of the type of scheme the Society will promote, the Sunshine Coast Council is promoting the *5 ways to wellbeing* scheme⁸ developed by the British New Economics Project and successfully deployed around the UK. This programme suggests a series of simple, practical, evidence-based actions to help people improve their wellbeing in everyday life by connecting with friends, family and other people, enjoying gentle exercise, taking notice of the changing world around them, developing new skills and interests and being generous with their time and thanks to others. Just as *Clean up Australia* began as a local initiative to clear rubbish from Sydney Harbour and spread across the country, so the Sunshine Coast scheme could be replicated elsewhere.

Mr Gale invited the guests to become founder members of the Society and share their expertise with likeminded people, establish and extend valuable networks, gain access to research and make a difference through active engagement in society.



Mrs Catherine Fritz-Kalish
Managing Director
Global Access Partners

Catherine Fritz-Kalish thanked sponsors and organisers of the Summit and hoped it would lead to the creation of further taskforces and produce practical outcomes. Over 1,000 GAP alumni are already engaged in projects through the 'Second Track' process. She thanked attendees for their interest and brought the evening to a close.

OPENING DINNER SUMMARY

- ▶ The NSW Government is committed to improving the availability and quality of education in the State and recognises the importance of education to the regional economy and sustainable growth in the region.
- ▶ The OECD is driving development of human capital as the foundation of every nation's growth and prosperity.
- ▶ The acquisition of higher order skills improve both an individual's employment and personal prospects, and Australia compares favorably to other OECD countries in terms of youth education and employment outcomes.

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- ▶ However, the nation's youth unemployment rates are increasing. 11% of young Australians are out of education, employment or training, and regional disparities remain stark, with the Northern Territory and Tasmania ranking well below NSW and other states in academic attainment.
 - ▶ Australia could learn from the way apprenticeships are delivered in other countries. Half of Australia's apprentices drop out before finishing their course, while a greater focus on the student experience and status awards encourages a completion rate of 87% in Germany.
 - ▶ Measures to extend and modernise the abilities of Australians working for SMEs are required, as smaller firms often lack the resources, time or motivation to maintain their staff's professional development, and personal skills are rapidly rendered obsolete in today's fast moving economy.
 - ▶ Universities should support local economic development to justify their public subsidy. Groups such as the Australian Chambers of Commerce could play a pivotal role in improving links between universities and small business in their region.
 - ▶ Skilled immigration should be encouraged as human capital attracts foreign investment and generates growth.
 - ▶ The tertiary sector should strengthen its academic reputation, provide more accommodation support and encourage entrepreneurship to maintain its attractiveness to overseas students.
 - ▶ A mix of cultures in society – and the interaction of different disciplines within a university – encourages the innovation and creativity modern societies require.
 - ▶ The newly formed Australian Society for Progress and Wellbeing will encourage the use of alternative measures of progress in policy decisions. It will celebrate and promote successful local wellbeing initiatives and help disseminate best practice around the country.

DAY TWO - Friday, 19 September 2014**WELCOME & INTRODUCTION**

Lisa Middlebrook welcomed everyone to the second day of the Summit and drew attention to the diversity of participants across education, academia, business, government and the voluntary sector. She thanked the sponsors and acknowledged the difficulty of specifying topics for discussion across all aspects of education. She then introduced the opening speaker, the Hon. Christopher Pyne MP, Minister for Education

KEYNOTE ADDRESS

**The Hon. Christopher Pyne MP
Leader of the House
Minister for Education
Australian Government**

Minister Pyne acknowledged Ms Middlebrook, Mr Peter Fritz AM, the Hon. Philip Ruddock MP, the Hon. Neil Batt AO and all present at the event. He hoped for a collegial and positive discussion in a relatively informal atmosphere, believing the Summit to be a great opportunity to exchange ideas and plans for the future.

Outlining the background to the Australian Government's tertiary education reforms, the Minister paid tribute to the contribution of the GAP Taskforce on Leadership in Education to the debate behind the scenes.

Real change is required to maintain the Australian tertiary sector's international reputation and attractiveness to foreign and domestic students. Anglo-centric nations such as Great Britain, the USA, Australia, New Zealand, and Canada benefit from good tertiary education systems. Eight Australian universities still rank in the world's top 200,

according to the Shanghai Jiao Tong index, and given there are 11,000 in the world, this ranks as a major achievement. However, the sector faces increasing international competition. Five years ago there were no Chinese universities in the Shanghai Jiao Tong index, which the Chinese established to identify the attributes of successful institutions to replicate. China now has six in the top 200 themselves.

Generating \$15 billion every year, education is Australia's third largest export industry after iron ore and coal. Gold exports rank fourth, with tourism and agriculture less important than is commonly assumed. Education is therefore a vitally important part of the economy, quite apart from the enormous contribution it makes to society, the workforce and the nation. The Australian Government has embarked on significant micro-economic reform in the sector. While it has a range of other important policies, from making health and welfare sustainable to abolishing the mining and carbon taxes, the education reforms are the most significant of their type in the budget and the most sweeping change in the sector since the Dawkins reforms.

The Government is granting universities the autonomy they need to make their own decisions. By reducing regulation and reporting requirements and handing more power to vice chancellors, universities will be freed to concentrate on their strengths and improve the quality and diversity of their output. Students will make a greater contribution to their education, while the deregulation of fees will allow a more realistic valuation to be placed on degrees. Instead of the tax payer and student paying exactly the same fees for a course at one university as they would at a very different one, variations in cost will more fairly reflect their comparative value in the job market.



"There is no need for all 39 universities to each run their own nursing school, teacher training college and law degrees. The days when any law degree guaranteed a job are over."

- The Hon. Christopher Pyne MP -

Deregulation will reduce wasteful duplication, allowing universities to drop courses they run only to generate funding and to concentrate on their specialities. There is no need for all 39 universities to each run their own nursing school, teacher training college and law degrees. The days when any law degree guaranteed a job are over; only around 20% of Adelaide law graduates found relevant employment last year. There is a similar glut of teachers, with thousands unemployed in NSW alone. Universities continue to churn out as many students as they can in these professions because the courses are relatively cheap to deliver and generate significant and predictable income.

However, students are misled into thinking such courses guarantee a career and, because every course costs the same, that every degree has the same allure for an employer. **This breeds mediocrity rather than excellence**, unemployment rather than employment and strips the public purse rather than boosting national productivity. Rather than maximise their income by producing as many graduates as possible without heed of whether they will find suitable jobs, the universities will be allowed to charge more for more prestigious courses and either cut fees for less attractive ones or drop them altogether.

The most prestigious degrees at the top universities should command a premium, be it marine biology at James Cook University or a law degree at Melbourne or Sydney. Students should not be misled into believing a degree similar in name but not in quality from different institutions will prove equally attractive on the job market. Social justice is served when students are charged a fair price for their course and cover more of its cost themselves, as they will be reaping its benefits.

Students should make a higher contribution to their fees because graduates earn an average of 75% more than people without a degree and suffer unemployment rates of just 2 to 3%. They also enjoy better health outcomes and have longer life expectancy. Over 60% of the Australian population do not have a degree and yet they pay 60% of the costs of higher education. **The reforms will establish a more equitable 50-50 average split between student and public funding**, and the more the public understands the true situation, the less opposition to the reforms there will be.

Far from limiting opportunities for young Australians in tertiary education, the reforms will increase them. The aim is to improve the education system, not degrade it, and far from cutting costs, **higher education will cost the taxpayer an additional \$950 million over the next four years**. The Commonwealth Grants Scheme is expanding its student subsidy to



non-university higher education providers to intensify competition and prevent established universities charging students excessively.

Universities will be forced to improve their standards and cut their costs to compete against new entrants as well as each other, and this can only benefit their students.

The Minister welcomed Labor's system of demand-driven undergraduate courses, but criticised the previous Government's failure to attach a value to these degrees. **The Coalition's legislation will extend the demand-driven system to the sub-bachelor diplomas and associate degrees** often studied by first-generation university attendees and adults seeking new skills in a fast-changing economy.

The resulting expansion of student numbers will again increase costs to the public purse, but the Kemp Norton Review⁹ showed that study for such qualifications massively reduces dropout rates for students going on to study at university. Students with sub-bachelor diplomas also achieved better results in subsequent bachelor degrees than year 12 students who went straight to university.

The Government is also abolishing the 20% fee on student loans previously imposed on vet students and the 25% fee for students in private higher education institutions. It is also launching a web portal to offer students the information they need to make informed choices and so make the market work better.

To ensure that bright students from disadvantaged backgrounds have access to the opportunities their talents deserve, **the Government is establishing the largest Commonwealth scholarships scheme in Australia's history**. One in every five dollars that a university generates in extra revenue will be earmarked for merit-based scholarships for poorer students. Although some academics argue that such students should attend their local university, Mr Pyne

argued they should be able to choose the best courses for them in the country.

Rather than second guess the decisions of vice chancellors or artificially engineer the survival of institutions or campuses, the Government will give universities the freedom and students the information they need to make the education market work. Consumers of education will decide where to put their – and the tax payers' – money, seeking and encouraging excellence throughout the system. This will both strengthen Australian universities in the face of increased competition for overseas students from Asia and elsewhere and liberate them to focus on teaching or research as they prefer.

Minister Pyne told attendees how the Vice Chancellor of the Central Queensland University had embraced the new opportunities. The University can now attract students from metropolitan areas, including with bursaries and offers of extra tutoring, as well as the attractions of the warm climate and relaxed lifestyle. This is but one example of a burgeoning competitiveness spirit and thinking in the sector. No longer forced by regulation to offer the same service at the same price, universities will compete on price and specialise in their strengths, while reducing the oversupply of some courses.

The Minister stressed his determination to pass the legislation and his commitment to reintroduce it in 2015 if it is blocked by the Senate this year. Although some amendments may be necessary to secure majority support, he was confident that support from cross-benchers and education stakeholders would ensure its success.

QUESTION & ANSWER

Asked from the floor why there was opposition to the scheme, Minister Pyne said many objections to the education reforms were born of general political opposition to the Government, rather than evidence-based objections to the specific policies. Most students have little idea what the reforms actually entail and, when reassured that the education loan programme has been extended rather than abolished, have no objections. Students know they can repay the loan at low interest rates once their studies have secured them a job.

Some Senators would prefer to use the consumer price index to index student loans, rather than the ten-year government bond rate.

One of the debate's great achievements is that **thirty eight vice chancellors acknowledge the need for reform**, although some disagree about details. Some vice chancellors would prefer to 'socialise' the Commonwealth scholarships fund to increase the benefit for regional and rural universities over the Group of Eight, for example, but this is a negotiation over terms, rather than a philosophical objection.



Certain vice chancellors who borrowed heavily to fund new campuses to maximise student numbers – and therefore income – under the previous arrangements are anxious about their immediate financial impact, but the Government is willing to discuss transitional arrangements towards reform. The Government does not seek the closure of any university, not least because these institutions have obligations of service to their local community. Many run satellite campuses which would not be viable as independent entities and so offer higher education in areas which would otherwise have none.

An older attendee agreed that many law schools were superfluous, but joked that his generation would soon be in need of nursing care and asked how universities could be encouraged to address community needs.

Minister Pyne expressed confidence that job market – and therefore student – demand would ensure universities offer sufficient courses to meet national needs. If there is demand for nurses, then some universities will maintain and expand their nursing provision, while perhaps closing their superfluous law schools. Others in turn may close their nursing schools to concentrate on their strengths in, say, agriculture, engineering or medicine. **The glut of teaching courses and graduates, compared to the number of jobs, will see some teaching colleges close or specialise in areas of shortage, such as languages, sciences, physics and mathematics.**

Many school principals complain that new teaching graduates are not prepared for the practical rigours of the job and require a good deal of professional development in their initial post. Universities may address this to make their courses more attractive to employers and therefore students. Just as an informed free market allocates resources efficiently in other sectors, so it will in tertiary education.



The Minister acknowledged **the importance of public investment in university research**, noting that \$11 billion of tax payers' money will be allocated to this end over the next four years. He accepted that such research would not be funded by the market and, as Australia has been a 'government country' since 1788, the public purse will retain a significant role. Although major private donations were made to Australian institutions in the early years of settlement, there has been little tradition of large philanthropic donations to Australian universities since then. While some progress has been made in recent years thanks to Westpac, the Forrest family and others, Australian donations are dwarfed by those enjoyed by American institutions, and the public purse will always be called upon here. Minister Pyne hoped universities will be so commercially successful in the future that rather than close down their undersubscribed classics courses, they will expand them for the public good, despite their lack of economic relevance.

The next speaker asked how else an informed market could be created to allow students to make the right choices and wondered if the Government is willing to challenge the community preoccupation with student numbers to focus on course quality.

Minister Pyne said his **reforms will fund an additional 80,000 students a year in four years' time**, the expansion of demand-driven courses and Commonwealth supported places with non-university providers. However, although the media remains obsessed by raw numbers, **the quality of outcomes is paramount**. Despite anecdotal evidence to the contrary, the Kemp Norton Review showed the demand-driven course system had improved universities' economic relevance without impinging on their quality. The reforms will enhance the international reputation of Australian education and research, retaining the interest of

both foreign and domestic students who would otherwise exploit their increasing mobility to study elsewhere.

He agreed that market reforms in education rely on good and freely available information to succeed. The Government is therefore establishing the **QUILT — Quality Indicators of Learning and Teaching —** web portal over the next twelve months to inform prospective students' decision making. It will aggregate data and surveys regarding student satisfaction, academic viewpoints and employer feedback, as well as short- and long-term job and income prospects, to help them choose the best course for their needs. Courses which prove attractive to employers and lucrative to students will thrive, while unsuccessful courses will wither, because employability is the major factor motivating student choice. Although both institutions charge the same today, it is unfair to pretend that a law degree from one university and another carry the same weight with prospective employers. Students of the future will have access to hard figures on their value and universities should set their fees accordingly.

Prospective students empowered to make informed course choices will compel universities to improve their products to attract their interest and funds.

Lisa Middlebrook thanked the Minister for his address and taking the time to field questions. She then invited the Hon. Philip Ruddock MP to chair the morning session.



"There is no reason why Australia's next Oxford, Cambridge or Harvard should not reside in a regional centre, rather than a state capital."

- The Hon. Philip Ruddock MP -

SESSION ONE

"Excellence in education: How can Australian education be globally competitive?"

***"The future of education in Australia.
National attitude to education"***

Session Chair

The Hon. Philip Ruddock MP
Chief Government Whip
Australian Government

The Hon. Philip Ruddock said the session would focus on excellence across the age spectrum and international competitiveness. He remembered floating the idea of an 'educational Olympics' at a previous GAP Summit and warned that his personal and family experience in education over the last twenty years was that the culture of 'fair educational outcomes' and a 'level-playing field' had fostered mediocrity. He wanted students to achieve their very best and, though recognising the leadership of the Group of Eight, he endorsed Minister Pyne's conviction that other universities could build on their individual strengths to excel in specific fields. James Cook University is unmatched in environmental science, for example, and there is no reason why Australia's next Oxford, Cambridge or Harvard should not reside in a regional centre, rather than a state capital.

Mr Ruddock criticised the 'rigidity' he had experienced during 20 years on the Australian National University (ANU) Council and said that academic tenure and the automatic pay rises generated by 'incremental creep' remove any incentive for established staff to improve their productivity. Tenured professors enjoy jobs for life whatever their performance, while younger academics, however outstanding their talent and commitment, are routinely offered short-term positions before being discarded.

Mr Ruddock agreed Australia's plethora of law schools was excessive, noting such courses are lucrative, but cheap to run as they require only a 'library and a desk'. Although every Australian university offers law, none have a world-class course which attracts the top students from abroad. Although it is natural for Australian courses to focus on domestic law, this offers little allure for overseas students or relevance to Australian businesses with an international focus. Mr Ruddock called on Sydney and other major universities to 'break the mould' and attract law students from around the world with a more flexible range of courses more relevant to their needs. If Australian education fails to embrace innovation and renewal, the country will suffer no less than if its gold mines were flooded or tourist attractions shut down.



Education is much broader than the tertiary sphere, and Mr Ruddock stressed the need to focus on early childhood education, rather than mere childcare, for preschoolers. The younger children are, the more information they can absorb, and a lack of early stimulation can leave their potential untapped and schooling permanently degraded.

"Better educational outcomes: Start early"

Prof Frank Oberklaid
Founding Director
Centre for Community Child Health
The Royal Children's Hospital, Melbourne

Prof Frank Oberklaid made a powerful appeal for a focus on early years' education. 300,000 Australian children start school each year, and though most arrive bright eyed and eager to learn, one in five have already fallen behind in their language, social or pre-literacy skills and find it difficult to catch up. One in three children in the Northern Territory are already struggling by the time they start school, and in some communities as many as half are unprepared to take proper advantage of what school has to offer.

Some of these children are 'dandelions' who will do well in any circumstances, but many are 'orchids' who will only thrive in good conditions. Such children may be referred to developmental paediatricians at the age of six or seven when they fail to progress, or become disruptive in class when they reach eight or nine and have not learned to read. They may leave primary school with little motivation and increasing social problems, difficulties which only intensify in high school. They may drift from school and drop out to, at best, find an unskilled job, but they will be the first casualties of an economic downturn and are more likely to suffer welfare dependency, violence or mental health problems or lapse into crime.

Although children from disadvantaged homes and poor environments suffer an increased incidence of such problems, they are seen in middle class communities and families as well. Schools are expected to compensate for deficiencies in a child's preschool years, but despite the best of intentions, it can be an impossible task. As problems manifest in the year before formal education, teachers are fighting a losing battle as soon as such children arrive and are left playing catch up when the child's developmental trajectory is already well set.

Uncontested research into infant brain development proves the preschool years are critical to later academic and employment success. It is not sufficient, as previously imagined, to merely keep infants safe, fed and immunised and expect them to start learning on their first day in the class. Childhood development is a product of both nature and nurture, but the environment in which an infant is raised shapes their whole lives. A newborn's brain has billions nerve cells, but their rudimentary connections leave the baby essentially helpless. The first five years of life sees the brain develop many of its complex networks and neural circuits, programmed by genes, but producing results as a function of its upbringing.

Children develop in the context of relationships and need a nurturing, stimulating environment to progress appropriately. The foundations laid in the early years are as fundamental as those of a house. If they are solid, the house will be strong; if they are flawed, the whole structure will crumble. Just as it is difficult, complicated and expensive to shore up the foundations later on and much easier to get it right from the start, over time the plasticity of the brain decreases and it becomes ever harder to change. Children learn far more readily than adults, be it a language, sport or musical instrument, but a dysfunctional set of relationships, poor childcare, families that are struggling with poverty, mental health problems or substance abuse, and harsh



"The foundations laid in the early years are as fundamental as those of a house. If they are solid, the house will be strong; if they are flawed, the whole structure will crumble."

- Prof Frank Oberklaid -



parenting cause stress to a child, resetting their physiological state and immune and endocrine systems. This can even leave the young person vulnerable later in life to ailments such as heart disease, stroke, diabetes and some cancers.

Robust Australian research reveals dramatic differences in children at two or three years of age in terms of social gradient, language, pre-literacy and communication, and social and emotional functioning. By the time children arrive at school, their trajectory is well set and resistant to change no matter how good their teaching. **One in five children arrive at school with decreased cognitive capacity, poor social and emotional skills and an inability to concentrate in class.**

Nobel Prize winning economist James Heckman argues that early childhood education is the most productive economic investment a country can undertake¹⁰:

'A large body of research [...] shows that skill begets skill; that learning begets learning. The earlier the seed is planted and watered, the faster and larger it grows. Environments that do not stimulate the young and fail to cultivate both cognitive and non-cognitive skills place children at an early disadvantage.'

Policy makers and parents should appreciate that learning starts from birth. A three year old does not postpone learning until he goes to preschool or

starts school himself. There should be universal access to preschool for all four year olds to maximise their potential, with a second year for vulnerable children to stop them falling behind their peers.

Childcare must be reframed as early learning and investment made to improve its quality, access and cost relief to make it a universal platform for all children. There must be a whole-of-government approach to invest in the early years to strengthen the education and health of the young citizens on which the nation's future prosperity will rely.

Building social and human capital is infinitely more important than creating physical infrastructure. Five year olds beginning school enjoy a comprehensive infrastructure, fully funded with tertiary educated staff, yet in their preschool years, which research shows to be even more important, they suffer patchy infrastructure, variable access and minimally qualified staff. There is constant debate about the cost and affordability of early learning, when it is just as essential as the schools system whose necessity is uncontested.

Prof Oberklaid emphasised the moral and ethical argument for Australia to give its children the best start in life, as well as the social and economic benefits, and appealed for the gap between research and policy to be closed.



The greater the influence the principal has over selection of staff, the more successful the school is likely to be. Key personnel can alter the dynamic of a whole school for the better and turn around failing departments through initiative, talent and drive.

- Ms Suzette Young -

“Factors in school success: Policy and practice”

Ms Suzette Young
Principal Emeritus
Willoughby Girls High School

Ms Young outlined the characteristics of schools which achieve better than anticipated academic results. Schools in wealthier districts have the advantage that most of their students arrive ready to learn and ‘imprinted with schooling paradigms’, while schools in disadvantaged areas will receive children less ready to learn and not ‘hardwired’ for academic success. A school’s results should be seen in the context of its catchment area, but there are schools of all stripes which ‘raise their heads above the canopy’.

There is no panacea for school improvement, but experience suggests that certain common elements make up the mix. **Successful schools have a receptive, amenable and predictable environment.** Their staff turnover is low and their systems are efficient, unobtrusive and make minimum claims on limited resources of space and time. Management ‘clears the decks’ for learning, rather than generating additional administrative clutter, and saves at least 90% of every teacher’s energy for teaching. Such schools are not ‘sedated by compliance’, but align their systems and efforts to support learning outcomes.

Successful schools employ cutting-edge pedagogy in their teaching and learning. An evidence-based model should drive teaching styles across the school, hand in hand with thorough knowledge of the general subject and specific curriculum. The NSW Quality Teaching Framework was ‘warmly embraced’ at Willoughby because it placed intellectual quality at the centre of learning. Teacher training should be continuous, take place onsite and after hours and be supported by the leadership team.

School principals must have the strength to say ‘no’, as those who agree to everything risk congestion and a loss of collective focus. Principals draw clear distinctions between high-value programmes and those that serve no educational purpose, concentrating school excursions into a smaller number of days to minimise disruption, for example. School directors should also leave principals to get on with the job without undue meddling.

Ms Young stressed the importance of selecting well-prepared teachers willing to inculcate the school’s culture. The University of Western Sydney’s Classmates programme, in which student teachers are given experience in disadvantaged schools, offers an excellent model. The greater the influence the principal has over selection of staff, the more successful the school is likely to be. Key personnel can alter the dynamic of a whole school for the better and turn around failing departments through initiative, talent and drive.



Principals must also be able to exercise meaningful authority in key areas such as finance and the school agenda without being hamstrung by excessive layers of administration or local government priorities which do not match their school's needs.

Ms Young called for debate about **increasing the authority of principals in government schools** to assemble effective teams focused on academic attainment. The new Australian Curriculum was designed to improve standards across all states and territories, but NSW and other states have augmented it with features from their own syllabuses and so core subjects and options will still vary across states, systems and schools. Ms Young urged consideration of measures to encourage evidence-based and effective teaching methods and better field preparation for student teachers to reduce attrition rates at the start of their careers.

Finally, she addressed the topic of excellence and equity in gene pools. Decades of data from Europe to sub-Saharan Africa show that academic results in disadvantaged environments remain low despite substantially increased funding. Additional funding to more privileged environments is also ineffective in improving results, according to OECD research. However, the selection of particular schools by ambitious parents has seen a balkanisation of middle-class schooling, be it through expensive private schools, state selective schools or comprehensives such as Willoughby seen as de facto local substitutes. This has concentrated higher achieving students in a smaller number of schools, widening the gaps between top and bottom and creating as yet unknown consequences for intellectual performance and sectarian division.

Mr Ruddock thanked Ms Young for her challenging observations and introduced Rear Admiral James Goldrick who spoke on aspects of Defence training.

"Adult learning: Your right to continued education"

**RADM (Ret.) James Goldrick AO, CSC
Adjunct Professor, School of Humanities & Social Sciences, UNSW**

James Goldrick emphasised that his views were his personal ones, not those of the Australian Defence Force (ADF) or UNSW. The education and training of ADF personnel develops teams and units which can operate effectively in ambiguous and dangerous circumstances. Defence personnel must learn to work together when afraid and facing the unknown. Defence training concentrates on the technical and military aspects it can only carry out itself and outsources less specialised aspects to other training institutions. It strives to ensure that skills taught in the military are accredited to allow their transfer to civilian employment, so encouraging their take up.

RADM Goldrick acknowledged tension between retaining trained personnel and equipping them with skills which may be lucrative in the civilian job market and admitted the ADF has 'shouldered the burden' of training people in technology, trades and engineering only to lose them to Australian companies reluctant to train people themselves. However, the ADF realises it cannot retain personnel indefinitely and acknowledges the importance of ex-servicemen being able to contribute to society and support themselves. Business does not only value the technical skills of ex-servicemen, but appreciates the leadership, teamwork and self-discipline ADF training instilled in them. American 'boot camp' feature films mislead young Australians about the nature and purpose of basic training, which in reality instils the self-discipline they will need throughout their lives.

The Australian Defence Force Academy¹¹ (ADFA) is run by the ADF and UNSW in a unique arrangement. Many military academies around the world are degree-granting bodies, but their academics are



"Standards in maths have declined in recent years, and although today's students are well prepared in many ways — well spoken, self-assured and able to deliver an argument in public — their standard of written English falls well short of their confidence in it."

- RADM (Ret) James Goldrick AO, CSC -

invariably employees of the Defence organisation. Australia's partnership is unique in that its academics remain university employees and trainees take UNSW degrees. Although these are dominated by technology, engineering, science, the arts and business courses are also available, and there is a strong, research-focused postgraduate program. ADFA is perhaps the only truly national undergraduate institution in the country. Its students come from all over Australia, with a high proportion recruited from the regions. It is ethnically diverse and, in addition to its international cadets, many of its 1,000 students were born in other countries.

ADFA is a powerful instrument of social mobility — nearly half its students are the first of their immediate family to take a degree, nearly twice the proportion of ANU. The variation in knowledge and performance by students from different States highlights the need for a national secondary curriculum, particularly in mathematics. The lack of alignment between the States and Territories presents a significant challenge for people beginning engineering, science and other maths-centric degrees.

Having been taught in six different schools in three different States and Territories himself, RADM Goldrick argued that Australia needed a national curriculum 40 years ago and its importance is even more pressing today. He believed standards in maths

have declined in recent years, while students from outside the major cities often do not have access to either the more challenging courses or sufficiently expert teaching. Although today's students are well prepared in many other ways — being well spoken, self-assured and able to deliver an argument in public — their standard of written English falls well short of their confidence in it. Students undergo a course in 'military communication', which is effectively a remedial English course to address the deficiencies of their years of education. Whatever their other talents and skills, many ADFA students have progressed through school without fully mastering English or mathematics, and the challenges faced by ADFA in remedying these deficiencies are surely shared by employers and other universities.

In contrast to certain issues experienced decades ago, the problems of students at ADFA are generally not created by the military environment, but reflect wider issues in education and society. ADFA must produce strong, rounded, socially responsible individuals able to lead others in dangerous situations and make difficult ethical decisions. Other institutions need to consider whether they should take greater responsibility for developing character and tackling behavioural and attitude problems in their own students.

DISCUSSION

Mr Ruddock thanked the admiral and the previous speakers for their thought-provoking addresses and invited statements and questions from the floor.

One delegate contrasted the notion that tertiary education remains a tool for social transformation, with Prof Oberklaid's argument that preschool experiences are decisive. He confessed to a 'sense of depression' if international evidence suggests a failure to maximise a child's potential before attending school leaves the education system playing 'catch up' thereafter. Reforms encouraging Australia's brightest 18 year olds undertake an appropriate university course would seem less of priority than ensuring the early years of every child are optimised. Many countries in Northern Europe completed this debate decades ago, invested in comprehensive early year's provision and are now reaping the rewards.

Another delegate endorsed the idea of school principals' autonomy, noting the success of Diocesan Catholic schools whose principals are given free reign. He identified four types of schools in Sydney — selective high schools in affluent areas on the north shore and eastern suburbs, comprehensive government schools in less affluent areas, expensive independent schools, and Anglican and Catholic schools charging lower, more accessible fees. He advocated more kindergarten to Year 12 schools to improve early learning and overall outcomes and called for higher aspirations in western suburb schools. The dismissive attitude of some parents to education and acceptance of poor behaviour must be tackled. Although improving parental attitudes remains a challenge, encouraging school autonomy and a culture of high expectations will help.

The next speaker acknowledged the Eora people as the original custodians of the land and said he was another who had been the first in his family to finish high school and attend university, his family emigrating from war-torn Europe in 1949. He quoted figures from newspaper reports¹² of 14 September 2014 showing that student performance had not improved since the Gonski¹³ report, stalling from 2009 to 2014 across the majority of measures. A deeper analysis shows that results have climbed for advantaged students, but slipped for those lower on the social scale, with the gap particularly stark in public schools. The problems Gonski identified are getting worse, rather than better. Australian preschool education relies more heavily on private (55%), rather than public (45%) funding, while Finland, one of the world leaders in PISA scores, funds preschool and tertiary education entirely from the public purse. The speaker criticised the Government's faith in markets, claiming that many reports demonstrate their ineffectiveness in education and counterproductive effect on social inequality. He argued that OECD figures show no link between principal autonomy or competition between schools and increased pupil achievement. He claimed that an 'independent public school' is an oxymoron and that competition serves only to increase social segregation and disadvantage.

Suzette Young explained she had carefully differentiated between 'autonomy' and 'authority' in her speech, avoiding the first term because she sought only the latter. She did not support the replacement of the education department by public school boards as envisioned in Minister Pyne's plan for independent public schools and noted that NSW Education Minister Adrian Piccoli has blocked such pilot schemes in the State. She accepted that 'autonomy' can mean different things to different people and its definition should be clarified before the debate continues. Conversely, there is broad acceptance of increased authority for school principals, particularly in the selection of staff.



Instead of attempting to attract good teachers to remote schools through a fixed-term contract and a guaranteed return to a metropolitan centre, principals will be able to simply offer them more money. This would allow principals to choose staff committed to the school and a culture of improving standards.

Prof Oberklaid said 'it broke his heart' to see a ten or eleven year old child referred to him for the first time after years of not learning in school. Such children were the victims of a dereliction of professional duty by their teachers. The child who falls behind at school is blamed, along with their family, instead of alternative solutions being offered. **Teachers must think more like clinicians in diagnosing educational problem and understanding barriers to learning.** Education funding should be 'turned upside down', and academic attention and a drive for excellence targeted at the first five years of life, rather than at universities. The most experienced, highly qualified and best paid teachers should be working with preschoolers, as these years are the most vital for educational outcomes overall. The nature of schooling in later years is less important, as well prepared children will flourish once they get to any school. Unfortunately, young children are subjected to mere child minding, rather than early years' education, with parents relieved to merely pick them up in the afternoon in the same state as they left



them that morning. The Productivity Commission urges more female participation in the workforce, but to compensate for the loss of full-time mothering, children must have access to high-quality early learning environments staffed by skilled tertiary-educated teachers with clear career pathways. Prof Oberklaid emphasised that, given their relative importance to the children in their care, they should earn more than secondary school staff.

The next speaker praised Prof Oberklaid's address as compelling, powerful and persuasive. The urgency of investment in the early years now seemed both fundamental and intuitive to him, and the speaker was concerned that government policy was letting down Australia's youngest citizens. Wherever responsibility for the problem lies between local, state and federal government and public or private funding, the speaker hoped the Summit's discussion would raise awareness and move the debate towards a solution.

Another participant stressed the need to educate parents about the importance of early years' education and asked how first-time parents could be encouraged to ensure their child's development was optimised.

The 'inverse care law' of epidemiology decrees that those most likely to benefit from services are also the least likely to use them, and the same is true in education. Prof Oberklaid accepted that a strong system of support exists, but the parents who need it do not use it. The reduction of barriers requires a whole-of-government approach. The solutions are known, but they are not implemented.

The next speaker touched on the poor maths and English skills raised by RADM Goldrick. He also criticised the substandard second language skills of most Australians, a deficiency which inhibits their opportunities to study and gain experience in Asia. Foreign students who study in Australia return home with much improved English and are often fluent in



several other local languages as a matter of course. **Australian children should be taught foreign languages as early as possible**, as their ability to absorb a new language quickly diminishes with age. Young children can learn three or four languages relatively easily, but all too often lessons do not begin until that ability is already in decline.

A speaker representing a small business perspective said a Chambers of Commerce submission to the Productivity Commission had warned against confusing the objectives of childcare and increased female participation in the workforce. The Government should be clear about its goals in both these areas and ensure its policies did not contradict. She accepted that research shows the Government and community should support early childhood learning for the year before kindergarten, but she highlighted the different needs of a six-month-old baby and a four year old preparing for school. She advocated improvements in childcare to allow highly educated women to return to work and generate a return on the public investment in their schooling. However, priorities have to be set.

Prof Oberklaid agreed that encouraging women to return to work after having a family was important, but stressed it should not be at the expense of their children. He criticised the idea that government should start by looking at what it could afford, when the evidence suggests it cannot afford not to pay for early years' education. He also criticised those who took a short-term, financial view of such issues as **society either funds early learning today or pays a much greater price tomorrow**. Rather than expect government to subsidise the childcare they benefit from, the best businesses encourage female participation by providing high-quality childcare on their premises. He challenged the business community to generate solutions and called for champions in industry to make the argument as well as academics, childcare workers and teachers. Significant and sustained productivity will not be

secured by women being rushed back into work as soon as possible after giving birth, but by guaranteeing those children the best start in life.

The next speaker agreed that if society continues to measure everything by economic benefits, rather than excellence in every aspect of life, it will never achieve what it wants to. There should be more holistic indices of improvement and value in education, childcare and other such issues.

The penultimate speaker spoke from a university perspective and pointed to the wave of digital and technological developments changing the world. The computer games market now dwarfs the film industry, for example, and its engagement of hundreds of millions of young people offers a model for both opportunistic and designed education in cyberspace. He underlined the importance of encouraging parents to stimulate their children's development and not assume they could leave the task to a suitable institution for a few hours a day. The education of parents about this issue is therefore as important as the early years' education of their kids.

The immersive power of games can prove addictive and be a force for good or ill depending on their design and function. Physical school facilities have inevitable limitations, but virtual exploitation could double their capacity. People can earn a living playing virtual games and new generations will be as comfortable in the virtual world as the real one. Policy makers and educators should embrace the potential of new technology in education as well as health and other sectors and incorporate it in kindergartens, schools and universities.

RADM Goldrick agreed that virtual simulations are useful in training and are widely used in the military to reduce costs and model scenarios impractical to duplicate in the real world. However, he was unconvinced about attempts to use virtual means to double student numbers as as qualified people are



still required to monitor and assess students and it should not be assumed that distance learning can multiply every benefit of education. Simulation is used by the ADF to hone skills secured in reality, not replace the need for practical training.

The principal of a high school with a large refugee population returned the focus to people and children in schools and communities. She supported the need for early education and timely intervention and noted that many refugee children attend school for the first time in Australia. Such children may already be 14 or 15 and have little or no command of English, and without targeted support they will struggle. Appropriate schemes for such children, who often lack resources at home, have successfully encouraged their aspirations and greatly increased the numbers attending university.

Session Chair Philip Ruddock thanked the speakers and contributors and brought the session to a close.

SESSION ONE SUMMARY

- ▶ The Australian Government's proposed reforms of tertiary education will increase student choice and encourage innovation and diversity of provision. The reforms will help both students and educational institutions to compete in an increasingly competitive world of rapid technological change.
- ▶ Institutions will be encouraged to specialise in areas of excellence while market forces will reduce the number of superfluous or low-quality courses created by a system which has traditionally rewarded uniformity and divorced educational provision from the skills required by the job market.

- ▶ In its pursuit of a more affordable and sustainable tertiary education system, the Commonwealth will deregulate tuition fees, expand support for diploma and associate degrees and reform the repayment of HELP loans. Students will pay a higher proportion of their own costs in recognition of the significant long-term value of the qualifications they earn.
- ▶ An expanded demand-driven funding system will embrace diplomas and associate degrees at TAFE and private colleges, encouraging students to study courses tailored to satisfy local job needs and opening opportunities for less prepared students to pursue their dreams.
- ▶ The Australian Government will remove the fees and limits which currently apply to HELP loans, and from 2016 all TEQSA tertiary institutions will be able to provide Commonwealth-supported places for students. Students will still be able to defer loan repayments until they meet the minimum repayment threshold, estimated to be over \$50,000 in 2016-17.
- ▶ The Government will remove the cap on student contributions to their own higher education, reduce course subsidies and allow universities and other institutions to determine the fees they charge students. Preserved funding students will receive and pay the current subsidies and fees until they complete their course.

- ▶ A new Commonwealth scholarship scheme will compel institutions to commit 20% of their additional revenue to helping talented students from poorer backgrounds enter higher education and succeed in their studies. Students from disadvantaged backgrounds will also be encouraged through the Higher Education Participation Programme.
- ▶ These reforms of course fees, subsidies and loans will ensure the long-term sustainability of the system and provide access to higher education for generations to come.
- ▶ Negotiations with crossbench Senators may see some modification of some elements of these reforms, but the Government remains committed to the deregulation of fees to improve the sustainability, quality, diversity and availability of higher education in Australia.
- ▶ Australian education should embrace excellence, rather than pursue uniformity, and institutions should offer a more flexible range of courses tailored to job market and international conditions.
- ▶ Preschool education should be expanded to prepare children from disadvantaged backgrounds for school and later life. Research into infant brain development shows the preschool years are critical to later academic and employment success.

- ▶ Development is a product of both nature and nurture, but the environment in which an infant is raised shapes their whole lives. One in five children start school at a disadvantage which they and their teachers will be hard pressed to remedy. More resources and higher status for the preschool sector would help all Australian children have a better chance to attain their potential in life.
- ▶ A range of strategies can improve high school results, including strong and empowered leadership, a reduction in unnecessary administration, a focus on evidence-based teaching, the building of a positive learning culture and the recruitment of dedicated staff.
- ▶ The training and education provided by the ADF is built on the importance of teamwork, individual character and the building of skills applicable in civilian life. Improved standards of mathematics and English in the nation's schools are required and educational institutions should take more responsibility for developing strong, well-rounded, socially responsible individuals.

SESSION TWO

"Australian education in the context of a deregulatory government"

Session Chair

RADM (Ret.) James Goldrick AO, CSC

Adjunct Professor

School of Humanities & Social Sciences, UNSW

The second session discussed Australian education in the context of a deregulatory government. Session Chair RADM Goldrick said the nurturing of people beyond formal education and training had emerged as a central issue in the opening session and could be a part of this session's debate. He then introduced the opening speaker, Mr Robert Griew, to discuss the wider ramifications of the Australian Government's tertiary reforms.

"Quality and opportunity in education"

Mr Robert Griew

Associate Secretary

Higher Education, Research and International

Department of Education

Australian Government

Mr Griew acknowledged attendees and colleagues, some of whom he knew through his work in the health system and interest in child health and development. As Minister Pyne had already outlined the case for education deregulation, Mr Griew concentrated on the reform's implications for quality, innovation and opportunity – three areas often raised in discussions with stakeholders and interested individuals.

The percentage of Australians with at least a bachelor degree has increased from under 8% to nearly 25% since the late 1980s, an outstanding achievement due, in part, to the Dawkins reforms. The percentage held by people aged 25-34 has tripled from 12% to

nearly 36%. Mass participation in higher education has posed a number of challenges, however, as it has in all advanced economies. Balancing greater accessibility and higher numbers of students with affordability for the tax payer, and increasing diversity with sustained quality to meet the needs of an ever more heterogeneous clientele, are sources of constant debate.

Although their resistance to change is often criticised, Australia's universities have accommodated this rapid expansion with great success, but further innovations will be required to meet fast-changing circumstances. This trebling of student numbers was accompanied by thirty years of cross-party government policy emphasising equity and common provision, rather than diversity and specialisation, and the tertiary sector has been unfairly criticised for adapting to funding and regulation expressly designed to drive this uniformity.

A well-educated workforce is the key to enhanced productivity and, in addition, education improves cohesion and understanding in the workplace and society. University research drives the development, adaptation and diffusion of better technologies and processes. UNSW academics calculate that research agencies increased multifactor productivity by 0.3% between 1993 and 2012, boosting GDP by \$9 billion in 2012 terms. The Department of Education estimate that a 1% increase in spending in tertiary education boosted GDP by another \$7 billion.

Regulation and funding drove university uniformity in the past, and it will now be employed to encourage **the diversity, quality and innovation** demanded by new technology and increased competition overseas. Universities were driven to offer the same range of courses by funding which rewarded the number of students accepted, rather than the quality of the course. Universities should not be blamed for responding to the incentives they were given.



"Regulation and funding drove university uniformity in the past, and it will now be employed to encourage the diversity, quality and innovation demanded by new technology and increased competition overseas."

- Mr Robert Griew -

Established regulation and funding not only encouraged uniformity, but perverse and imbalanced incentives between increasing demand and a rigid price system created difficulties while governments of all political persuasions struggled to maintain the level of taxpayer funding required and balance public and private contributions.

The demand-driven system introduced by the previous Labor government led to a renewed surge in student numbers, but, as noted by Minister Pyne, a review he commissioned found no fall of standards. Although students with lower entry scores are less likely to complete their course, the positives overwhelm the negatives, even for those students themselves.

While many challenges remain, much can be done by government to ease unnecessary burdens for the tertiary sector. The average university spends over 2,000 working days and \$800,000 to \$900,000 gathering information to send to the Department of Education every year, for example.

The Coalition's reforms will be considered by Parliament and the Senate over coming months. Mr Griew outlined how they will increase opportunities for students from disadvantaged backgrounds, support innovation and maintain quality.

There has been a sustained effort to encourage the educational aspirations of students from poorer socio-economic backgrounds over recent decades, but despite partnerships with schools and other measures, progress has been disappointing. Shifts from public funding towards student fees have had little effect on participation rates, compared to previous expansions of provision and the recent surge through the demand-driven system. These later reforms generated significant growth in student numbers from all levels in society, and the proportion from less socially advantaged backgrounds grew as participation from wealthier sectors reached saturation point. It was this general expansion, rather than the sudden success of equity programmes which had little effect in the past, which boosted participation levels from disadvantaged students.

The Coalition is expanding the demand-driven system to advanced diploma and associate degrees, offering a stepping stone to less educationally prepared students to access and succeed in higher education. In addition to these new pathways, the new Commonwealth programme which requires wealthier universities to offer scholarships will benefit the best students from poorer backgrounds and ensure a lack of private finance is no barrier to success.

The opening of the market to non-university providers will encourage the entire sector to innovate. Universities will offer more online courses and forge partnerships with non-university providers to bring new approaches to the tertiary scene.



Although the results of research are assiduously assessed and, as noted, universities are required to produce a great deal of data for the Department of Education, **Australia still lags behind other nations in generating the metrics required to assess the quality of tertiary teaching and learning.** Minister Pyne secured acceptance of a uniform set of quality indicators that, for the first time, are based on the surveyed experience of students and the employers they go on to work for. All publically funded institutions will be required to produce this information and, as mentioned by the Minister, it will be offered through a government website to help prospective students make informed decisions. Empowering students will bring market pressure to bear on institutions, forcing them to improve course quality and employment relevance and compete on price. This will in turn reduce the need for departmental regulation, although care will be taken to monitor and maintain standards.

While the reforms are commonly misrepresented as a mere cost saving shift from public to private financing, they are much more ambitious in scope, said Mr Griew.

RADM Goldrick then introduced Professor Brooks to discuss regulatory and technological change in the health sector relevant to education.

***"Regulatory challenges in a digital world.
A case study: Educating for consumer engagement in health"***

Prof Peter Brooks AM
**Professorial Fellow, Centre for Health Policy,
School of Population & Global Health
University of Melbourne**

Prof Brooks pointed to the similarities and interrelationships of health and education — both have waiting lists, for example, and education drives health to a significant degree. The first few years of

life are crucial to both health and education, and Australia must give its children a good start in life in both. As with early years' education, the costs of medical research are high, but not as high as not doing it. Fully half a person's health outcomes are determined by their social circumstances, housing and income — which are in turn largely a product of the employment their education secures.

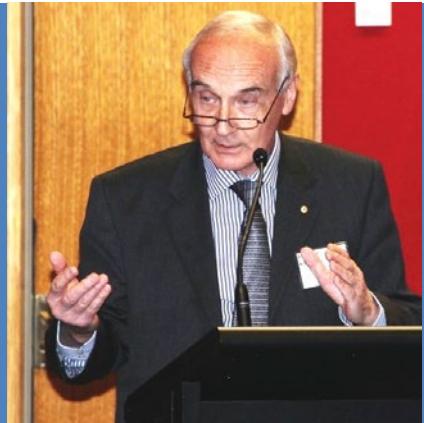
Major efficiency gains can be sought in both sectors. Australia faces a 'tsunami of chronic disease,' but a fifth of Australia's \$130 billion health budget is ineffective. The system tackles illness, rather than promoting health, and though patients are satisfied with their visits to health professionals, many visits to the general practitioner for more trivial complaints are unnecessary. Repeat prescriptions could be handled by pharmacies, and more consultations could be conducted online.

Improving the health education of patients, even at the price of diverting money from acute care in hospitals, would generate massive health benefits. Only 50% of Australian adults can adequately read and interpret the label on a medicine bottle, for example. Doctors, nurses and other health professionals should all be health educators and must prioritise more effective communication with their patients.

Prioritising team work among health professionals could be another significant 'game changer' in the search for better outcomes at lower cost. Although doctors are still trained to work as individuals, they must accept a role in care teams alongside nurses, physiotherapists, social workers and IT experts to manage chronic disease and improve health outcomes. Obsolescent demarcation practices which prevent nurses teaching doctors, for example, are absurd as every team member should be encouraged to share their experience and expertise with their colleagues. The opposition of registration authorities to greater role flexibility must be overcome, as it

"Only 50% of Australian adults can adequately read and interpret the label on a medicine bottle. Improving the health education of patients, even at the price of diverting money from acute care in hospitals, would generate massive health benefits."

- Prof Peter Brooks AM -



controls most of Australia's medical schools. True professionalism rests in a willingness to learn together, build skills and encourage leadership, rather than protect outdated and self-serving notions of status.

Greater deployment of modern simulation techniques would improve opportunities for debriefing, self-reflection and improvement in medical training. Although some degree of practical clinical experience is irreplaceable, an American study of 600 nursing students who had 25% or 50% of their clinical practice substituted by simulation showed they attained similar results in national nursing examinations. The much accelerated patient throughput in Australia's hospitals means there is much less scope for medical trainees to safely interact with patients in traditional ways. While a patient would once enter hospital two days before an operation and stay for ten days afterwards, allowing plenty of time for student interaction, patient stays are now measured in hours. Simulation must be widely employed to generate the reflective practice vital for trainee medical professionals.

In 2012 the Productivity Commission estimated that 600,000 carers should be trained by 2018 to cope with Australia's ageing population. Showcasing the links between health, education and new techniques and technology, the University of Tasmania recently

created a massive open online course (MOOC) to train carers of dementia patients. The course has 25,000 registrants in 96 countries with a completion rate of 40%.

A decade ago, the federal ministers of health and education met only once a year to discuss matters of mutual interest. Given the mutual dependence of health and education, they must cooperate more closely in the future.

"A new approach to educational disadvantage"

Ms June McLoughlin

**Director, Family & Children's Services
Doveton College¹⁴**

Ms McLoughlin agreed with the importance of early years' education and said schools must improve their interaction with young people, parents and the broader community to secure better community outcomes. She underlined the importance of evidence to back up opinion in educational debate, quoting Australian Early Development Index (AEDI) figures showing 20% of Australia's children arrive at school ill-prepared for formal learning.

The school readiness of children is a function of their family care and community circumstances. Children's academic outcomes are also directly related to the educational attainment of their parents, especially their mothers, and so mothers must be educated to ensure their children thrive at



school. Barriers to success at school include poor health, poverty, a lack of positive parenting, unemployment, disability and family violence. These issues must be tackled in conjunction with efforts to improve performance in the classroom to achieve success. Children from disadvantaged backgrounds benefit greatly from regular participation in high-quality early education programmes from two years of age – rather than just one year of preschool starting at four. Efforts to give all children a rich learning environment at home must engage parents as partners in their children's learning by educating them to educate their offspring.

Research in the USA links higher educational outcomes in children with greater adult presence in school. The integration of education, community and health services in a single institution in deprived areas helps children and families together through a holistic support. The provision of funding should be tied to outcomes, rather than the purchase of discrete, independent services. The need is not for more money, but to reconfigure what is already spent more effectively. School and community resources must be restructured and woven together in a comprehensive and ongoing process to address barriers to learning and development.

Schools offer an ideal base for the local integration of education, health and community services to achieve better outcomes for young children, families and society. Schools must help children navigate their way through education, identifying their needs, developing their talents and instilling a positive and active attitude to learning throughout life. As Don Edgar wrote in *The Patchwork Nation*¹⁵:

"The school must become more of a community learning centre than a place separating children from the world of adults and the wider community."

Many parents across the country do not feel welcome in their children's schools, seeing them as 'scary places' and discouraging them from participating in their children's education.

Doveton College in the south eastern suburbs of Melbourne offers an innovative integrated approach to supporting the health, development and learning of its children and their families. It is the fruit of a partnership launched in 2009 between Victoria's Department of Education and the philanthropic Colman Foundation to improve outcomes in a community with a high migrant and refugee population. After two years of consultation, three local primary schools and a secondary school with outdated infrastructure and poor results were closed, and a new school was built on one of the existing sites at a cost of \$40 million. The new College opened in January 2012 and caters for families and children from the pre-natal stage to Year 9.

In addition to a traditional curriculum, the College, in partnership with local agencies, offers fully integrated 'wrap-around' services, including early years' education for children from birth to five, playgroups, parenting programs, child health services, immunisation, and family, mental health and refugee health support. It offers activities tailored for both men and women – men's groups and sewing and cooking sessions catering for up to 50 women at a time – as well as pre-employment programs, access to adult education, volunteering opportunities and referral to other appropriate services. It is currently establishing a 'baby college', based on a scheme in Harlem in New York, which enrolls women in the third trimester of pregnancy and takes them through a twelve-month curriculum to integrate them into support networks and improve their parenting skills, social relationships, financial literacy and employment potential.



"The school readiness of children is a function of their family care and community circumstances. Barriers to success at school include poor health, poverty, a lack of positive parenting, unemployment, disability and family violence."

- Ms June McLoughlin -

Doveton was chosen as the site of the new project because of its deep social disadvantage. It has the fifth lowest income for an Australian metropolitan area and its 3177 postcode, shared with Eumemmerring, has a SEIFA¹⁶ score of 846 — within the lowest quintile of all national communities. Population mobility is high, refugee settlements are increasing and over 48 different languages are spoken. Only 20% of its residents have a full-time job, with some families enduring their third or fourth generation of unemployment. Poor health and wellbeing, high child protection notifications, drug and alcohol abuse, family violence, mental health issues and intergenerational poverty are as much issues in the area as low education attainment, poor English skills and high disability and developmental delay. 80% of the children at Doveton come from a family with a health care card.

AEDI results show that 30% of Doveton children are developmentally vulnerable in two or more domains when they start school compared to 10% nationally. NAPLAN results show that 58% of Year 3 and 70% of Year 5 students are below the expected level in reading, compared to Victoria's average 4% of Year 3 and 5% of Year 5. A number of children in Grade 7 are five years behind in literacy and numeracy. Although other regeneration schemes have failed to raise educational standards in such areas, the Doveton project is the first to target whole-of-life opportunities for families and children.

Although still in its infancy — the primary department opened in 2012 and the secondary department in 2013 — it has already boosted local self-confidence and esteem. Many parents meet regularly at the College to participate in their children's learning and improve their own health and education. More than 50 parents volunteer in the classrooms, and over 100 families have gone through pre-vocational training, for example, with a number taking certificates in hospitality and other employment avenues.

As well as integrating long established public services, the College offers a vibrant platform for innovation and risk taking through its partnership with philanthropic funding. It aims to build an environment of success, mutual respect and collaboration between parents, families and school staff as well as members of the wider community. A detailed framework to evaluate its performance against specific targets has been developed, and a base line of data for 2013 is complete. Annual reporting against a range of indicators will track its achievements in improving children's academic performance, adult participation in education and local engagement.

Ms Loughlin then invited her colleague Mr Julius Colman to provide additional comments in regards to his philanthropic support of Doveton.

"The size of philanthropic donations alone is not the answer. Tying philanthropy to a particular school with the help of local government, local business and the community may prove more effective."

- Mr Julius Colman -



Julius Colman said his father had arrived in Australia as a refugee and so he had looked to support a project serving a high migrant population. Doveton was originally planned as a Year 1-12 school, but NAPLAN results showed the futility of a traditional school in an area where all Year 3 students were already three years behind. The Victorian Government agreed to integrate early childhood learning into Doveton College as a result, as the sooner such children are given help, the more chance they will have to succeed.

Mr Colman agreed with Prof Oberklaid that Year 1 is 'already too late' to begin education for such children, and cited Prof John Hattie's conclusion after a copious review of educational research that 50% of educational outcomes are a product of the child's parents, the child themselves and the local community, rather than the teachers and the school they attend. Doveton is opening its resources to the community to unlock that missing 50% and help its single parent families, migrants and refugees.

Mr Colman recalled a thirteen-year-old Sudanese girl entering school in Year 9 who could not speak English and had never sat at a school desk, and urged schools to 'turn themselves out into the community' to help young people like her.

The size of philanthropic donations alone is not the answer — we need to find the right model. Bill Gates gave away a fortune to educational projects, but admitted he "*hadn't moved the needle*"; he concluded that tying philanthropy to a particular school with the help of local government, local business and the community was the best model. **Doveton is beginning to produce results and could prove a model for elsewhere.**

As a lawyer and businessman, rather than an educationalist, Mr Colman expressed bewilderment at the way education is run. Brilliant teachers can only be promoted away from the classroom to administrative posts that they may have no talent for; teachers who arrive early and work late receive no more reward than those who do the bare minimum. No high performing system could work that way.

Mr Colman said Doveton was just two steps down a journey of 100 steps, but he remained excited by its potential.

DISCUSSION

RADM Goldrick summarised the session's main points of debate, noting the need to tackle social disadvantage and help people achieve their potential through 'wrap-around' services. He underlined the value of health literacy and called for a widening of



health and ethical education for Australia's younger generations. ADFA finds it necessary to run its own citizenship programme covering equity and diversity, healthy relationships, sexual ethics, fitness and nutrition, and young people in every community must also be taught about healthy lifestyles and citizenship, the dangers of alcohol and drugs, responsible behaviour in the community and safety online and in social media. If ADFA must run a scheme to encourage social responsibility, similar schemes must be even more important for young people who have not achieved the same level of success. As well as benefitting the young people in question, they should also help them give their children a better start in life.

RADM Goldrick thanked the speakers and invited comments and recommendations for action from the floor.

The first speaker praised Mr Colman's 'disruptive philanthropy' and Ms McLoughlin's deep subject knowledge and said the success of Doveton College was not 'rocket science', but 'common sense'. He called for philanthropists to support disruptive long-term systemic change.

A private education provider supported the Australian Government's tertiary education reforms and said the commercial education company Navitas is discussing partnerships with six Australian universities as a result. He called for **whole-of-government support for Australia's \$15 billion international student sector** and advocated a streamlining of regulation for private sector education providers as existing rules address the needs of domestic public universities rather than the commercial international sector. Current risk rating of assets, for example, is modelled on the operations of public institutions rather than private companies. Although confident that innovative methods of delivery will emerge and expand access to students of all abilities and backgrounds, the speaker called for

a shift to evidenced-based practice in literacy and numeracy as the PIRLS study¹⁷ ranks Australia last of all English-speaking countries for early literacy.

The next speaker agreed with the importance of evidence-based action. He did not think an education system with eight of the world's top 200 universities was 'broken', and asked what other country had a fifth of their institutions ranked so prominently. He argued that deregulation has proved ineffective in the past as unequal inputs will always equal unequal outputs.

In reply, Mr Griew said the Minister had praised Australian tertiary education, but its current growth and funding was unsustainable. Great lengths have been taken to ensure affordability for all students, and he offered evidence that deregulation has proved successful around the world. **A Canadian study of six European Union nations which adopted similar reforms found that equity, participation, total funding and innovation were not damaged by a greater reliance on private funding, as long as the student loan scheme was robust.** There is strong, coherent, logical thought behind the current government policy and ample evidence to support it.

The next speaker reminded the Summit of the state, rather than federal, responsibility for education under the Australian constitution. The word 'education' is not mentioned in the Commonwealth of Australia Constitution Act¹⁸. He believed education policy to be hampered by this constitutional limitation on Commonwealth involvement, despite public support for federal involvement, and hoped expanding federal powers in education would be considered in the forthcoming government green and white papers on constitutional reform. He urged attendees to raise the subject to the top of the agenda.

The same speaker also criticised the current uniformity of universities and their standard of administration. Universities must be held to better account in a more deregulated system to prevent them 'feathering their own nest' at the expense of their customers. He questioned why collusion between university vice chancellors in terms of research and other topics was allowed, when similar agreements between mining companies would put their directors in jail. **Deregulation must promote competition as well as transparency.**

Another guest complained that the University of Queensland procurement policy forbids tenders from companies with less than five years of operation. This hamstrings innovation, reduces competition and damages the development of start-ups. Many high-performing new technology companies are forced to work outside the traditional education system as they are not supported by publically funded schools and universities. Although Australia's international student sector is one of the largest in the world, the country has a relatively small education technology industry. This nascent eco-system needs public support as many of the challenges discussed at this Summit can be tackled through the intelligent use of technology. Skype can be used to help remote parents and grandparents educate their children, for example, and other tailored technology applications are equally effective and easy to use.

Another speaker agreed with the importance of focused targeted interventions early in vulnerable children's lives, but argued that intelligent, informed, evidence-based research and detailed recommendations on improving education are already outlined in the Gonski Review. Early support for learning not only helps children when they start school, but builds social capital in the local community in much broader terms.

The next delegate raised **the educational needs and potential of senior citizens**. Australia's growing number of older people creates a major new market for education as they have the time, disposable income and interest to study again. They should also be encouraged to volunteer their services in classrooms to teach reading skills as they have the time, patience and dedication required. The education system should recognise older Australians as both a market and resource, while a broader emphasis on lifelong learning would not only benefit adults but support the education of the young.

A director of a strategic design agency thought **innovations in health system design could be applied to education**. Both sectors are complex and dynamic, rely largely on people and defy understanding from any single perspective. Multiple views must therefore be sought when discussing meaningful change. The speaker highlighted the notable absence of students at the Summit, given their future was being discussed. Vision and 'a sense of possibility' are required to revitalise any organisation and, although evidence-based solutions are crucial, a reluctance to embrace fresh and bold approaches dooms a timid organisation to forever be a follower, rather than the leader in its field.





The next speaker proposed the creation of a GAP taskforce to produce concrete solutions for early, secondary and tertiary education in 2015.

A current university student criticised the standard of teaching he received, estimating that only a tenth of his 40 lectures so far had been truly ‘engaging’. Attention should be paid to the standard of the educators, as well as those they are educating, as more interesting teaching would generate better results.

A university director contrasted the non-selective nature of schools against the selective requirements of universities, while a global law firm employee backed the call for more innovative solutions, remembering that most articles discussing the ‘unprecedented’ challenge of the global financial crisis concluded with proposals for the same old solutions. Given Australia’s small population and relative wealth, it has an opportunity to embrace radical change and inspire the world, rather than being led by it. The speaker called for the business community to adopt ‘policies they will be proud of in twenty-years’ time’ and offer early years’ education to the children of its employees. He also differentiated between a lack of access to education in the past and a lack of intelligence — people who left school at fifteen in previous decades were no less capable than today’s university students, but merely lived in different times.

A member of a new education technology company advocated the use of technology to teach both preschoolers and university students. He was excited by young children using iPad apps to learn as well as play, and called for **the delivery of education on a wide range of smartphones and tablets**. Today’s children interact naturally and directly with such devices, subverting cumbersome and old-fashioned notions of computer learning designed by people raised before ubiquitous IT. Mobile devices offer

unprecedented opportunities to scale up provision to millions of Australian families with young children, while the Indian ‘Hole in the Wall’¹⁹ experiments show how readily uneducated children can understand and interact with technology if given the opportunity to do so. New ‘smart’ approaches will encourage self-driven learning, problem solving and the negotiation of mistakes, and the delegate hoped content specialists and app developers would embrace these possibilities.

A consultant and part-time lecturer at UTS remembered the administrative obstacles she had encountered when attempting to refresh her course content. Using hands-on, experiential learning methods and incorporating six weeks of software testing experience at Suncorp, her class quickly grew from 14 students to its maximum capacity of 44. Both the students and Suncorp were enthusiastic participants, and this approach demonstrates how universities and educators can engage with corporate organisations to deliver practical, attractive and effective learning experiences.

The next speaker asked what specific traits should be taught to young children to encourage their development in language, learning and play. He was told that the most important thing for a child to have is not an iPad, but someone who loves them.

Technology is useful, but no substitute for real human interaction. Early brain development occurs in the context of human relationships — a baby learns through feedback from an adult. Babies are learning machines, but their natural curiosity must be encouraged in a warm, loving, nurturing environment. Parents can assume that children will have plenty of time to learn at school, but they learn from play from the start — play is a young child’s occupation. Indeed, Australia’s early years’ education involves a play-based developmental curriculum. Parents must be supported and problems addressed to help their child flourish in a loving home.



Another attendee defended the value of 'coming second'. There must be first movers in every sphere, but for any technique to be worthwhile in a wider context, it must be reproducible. He recalled a YouTube video in which a hillside of picnickers are induced to dance not by the first young dancer, but by the people who first copy him. He speculated that a 'second mover' scientific journal dedicated to testing and proving initial research would be as valuable as any other.

The next contributor told guests about 'KidZania'²⁰ - an educational theme park which offers children the experience of being a doctor, pilot or bank teller rather than rides. Originating in Mexico twenty years ago, there are now twenty KidZanias around the world, and he hoped one would soon open in Australia.

A guest with broad experience of different state systems across Australia called for schemes such as Doveton to be turned into models which could be replicated across the country. Bureaucracy and prejudice must be overcome to allow these 'pockets of excellence' to be systematised and disseminated. **Incentives must be considered to encourage different jurisdictions to create networks of early learning centres and schools to share ideas and improve practice.**

The next speaker observed that Australia had suffered generational social disadvantage since its modern foundation, and a great deal of energy has been expended on different disadvantaged communities to little effect. He warned that attempts to scale up 'pockets of brilliance' were expensive and had no greater chance of success than those which had failed in the past. While it is easy to advocate the repetition of isolated success stories, Doveton's achievements cannot be quickly replicated in other areas. A long drawn-out process of managing risk, assessing situations and holding enquiries tends to stall without progress in a system

with little appetite for risk or change. As resources are inevitably limited, the speaker preferred to concentrate on generational change, just as Ireland is now reaping the benefits of the reform of its pre-kindergarten sector some years ago. Prams in the USA now come equipped with iPads rather than rattles, and while technology may not be the answer for severely disadvantaged people, it can offer options at a reasonable price point for a great many people.

Another speaker supported the call for an ongoing task force to consider practical steps forward and invited attendees to contribute to the GAP Taskforce on Leadership in Education which is currently working with the Department of Education to drive innovation and share successful practice.

Another attendee said Australia should study the strategies which countries such as Singapore, Finland and Israel use. **Australia should benchmark itself against the best, rather than the average**, and invest in education to produce similar results. Rather than attempt to replicate good pockets of domestic activity more widely, Australia should look abroad for its exemplars as these are its competitors in the international market.

The next speaker took a different view, reminding the Summit that a greater disparity of educational outcomes exists within Australia than between it and other countries. The Australian Capital Territory has literacy and numeracy rates on par with Finland, for example, and so it may be more relevant to discuss how to raise national standards to those of the ACT. Overseas benchmarks are useful, but domestic policy makers should tackle the socio-economic factors which can determine performance as much as educational ones.



Another guest with long experience on university boards admitted he had not considered **the balance between encouraging female workplace participation and nurturing early learning environments for their children** before the day's discussion. If an ongoing GAP taskforce was formed after the Summit, he hoped this issue would form an integral part of its activity.

Another guest asked what colleges and industry could learn from ADF methods of teaching highly complex skills to young people. Forces personnel have the advantage of constant training and exercising when not on active duty. Military personnel train as part of teams, rather than individuals, which underlines their personal responsibility to others and the importance of others to them. Such team training has applications to both health and education. Virtual simulation can also help sharpen professional skills. A Qantas pilot must train in a simulator before flying a plane after a break, but an orthopaedic surgeon can step off a plane after six weeks of skiing and go straight into surgery. The military ensure that personnel as well as equipment are fit for purpose after a layoff too, but such virtual training has its dangers. The stress caused by the constant simulation of dire emergency conditions can leave pilots 'gun-shy' in real life, and pilots must enjoy flying to excel, or even be safe, in their job. Surgeons, like fighter pilots, must be utterly self-confident to succeed. However, less extreme approaches can still be effective. Research shows that playing a simple video game before entering surgery can improve a surgeon's hand eye coordination, leading to a 20% reduction in surgery time with no adverse medical affects. However, there is still no substitute for real life experience, even if it is tangential to the job. The airline pilot who saved the lives of his passengers by ditching in the Hudson River after losing engine power managed the manoeuvre because he was also an expert glider pilot, not because he had practised the technique in a flight simulator.

Another attendee raised other pros and cons of virtual training. It can offer twenty times as much hands-on time as practical training, for example, but flawed scenarios could reward techniques which would fail in real life. Managers must be fully informed about every aspect of such training methodologies before they are implemented as, like any other powerful tool, they can prove dangerous if misused.

The next contributor stressed **the need for schools to encourage children's artistic creativity as well as maths and languages**. Children start to study music at a young age in Germany, Israel, South Korea and Scandinavia and are raised to enjoy and express themselves through music, painting and dance. Just as Doveton embraces the parents as well as the child, she noted that the Suzuki violin method teaches both parent and the child.

A principal in Victoria with experience of schools in deprived socio-economic areas agreed that schools benefit greatly from receiving new pupils with age-appropriate skills as this enables them to focus on learning. She called for **more effective measures of school performance**, as current indices encourage the removal of poorly performing children from secondary schools to improve their average results. Schools must retain their clarity of purpose and not become 'community cure-alls'. When issues such as bullying are raised, it is always schools which are expected to act, but they cannot tackle every social issue without deflecting from their central purpose and limited time. Schools should deliver education and not be turned into proxy tools for social engineering. The speaker called for a reconceptualisation of schooling, admitting that the longer a child spends in the classroom, the less creative and curious they can become. Technology and people should be used for what they do best, and the training of educators must be overhauled to improve learning outcomes.

The Chairman thanked speakers and attendees for their varied contributions and drew the session to a close.

SESSION TWO SUMMARY

- ▶ The number of Australians with a bachelor degree has grown from under 8% to nearly 25% since the late 1980s. Balancing higher numbers of students with the cost to the tax payer and increasing diversity while maintaining quality for an ever more heterogeneous clientele demands reforms which will improve quality, innovation and opportunity for all.
- ▶ A well-educated workforce will not only increase economic productivity, but improve cohesion and understanding in the workplace and society.
- ▶ University research drives the development, adaption and diffusion of better technologies and processes and will continue to enjoy federal support.
- ▶ Just as patterns of regulation and funding fostered uniformity in the past, so the Coalition's reforms will encourage the diversity, quality and innovation demanded by new technology and increased competition overseas.
- ▶ The opening of the market to non-university providers will intensify competition and encourage innovation in both courses and delivery styles. Universities will offer more online courses and forge partnerships with non-university providers to offer students new pathways to study and succeed.

- ▶ Study of the interrelationships of health and education can offer benefits for both sectors. The development of teamwork, expanded training through virtual simulation and the promotion of new online courses would improve efficiency and improve patient outcomes in healthcare.
- ▶ Melbourne's Doveton College delivers holistic educational, social and family services to improve childhood outcomes in a highly deprived area. In addition to a traditional curriculum, Doveton College partners with local agencies to offer fully integrated 'wrap-around' services, including early years' education for children from birth to five, playgroups, parenting programs, child health services, immunisation, and family, mental health and refugee health support.
- ▶ These integrated approaches support the health, development and learning of vulnerable children and their families and could help reduce the disadvantages faced by 20% of Australia's children today.
- ▶ A more rational approach to education management is required, and the best teachers should be paid more for their efforts, rather than promoted away from the classroom into administrative roles.

LUNCH SESSION

Mr Alan Castleman
Chairman
Australian Centre for Health Research

Alan Castleman outlined the changes in technology he had experienced over his working life, from slide rules through mainframes to smart phones. He invited Prof Stephen Burdon to deliver the lunch address on the economic and social changes wrought by digital technologies and the implications of digital disruption in education.

***"Digital disruption's impact on education"***

Prof Stephen Burdon
**Professor, Faculty of Engineering
& Information Technology**
University of Technology, Sydney

Prof Burdon outlined four themes – how to ‘catch the next wave of the digital revolution’, the new skills required by Australians of all ages, how Australia can rebuild its higher education business model, and how to take best advantage of exciting transformational times.

The world ‘disruption’ carries negative connotations, but change can be liberating, exciting and fun. Prof Burdon hoped to find another term which was less intimidating. The world has been living in the digital age for thirty years, but economic indicators in the leading digital nations such as the USA and UK went into overdrive between 1996 and 2004, with growth in annual GDP increasing by almost a third and productivity growth improving by half. Australia was also a leader at that time, but today is merely ‘hanging on’ and will become a laggard in the near future. Prof Burdon believed another point of change to be occurring today, which some call ‘second machine age’ and he termed the **‘intelligent software revolution’**.

Sophisticated web services are now cheap – or free – and ubiquitous and easy to use on devices almost everyone carries. Individuals combine and recombine services as they wish, and new virtual solutions have quickly transformed established industries by subverting or ignoring protocols which grew to serve producer, rather than consumer interests. People have flocked to the crowdsourced Uber taxi service, for example, while messaging apps such as WhatsApp have slashed the profits of large telecommunication companies by perhaps \$400 million around the world.

An **‘entrepreneurial explosion’** is producing thousands of new firms in every sector, and some believe this ‘second machine age’ will have an even greater impact than the first. America is leading the way in this new era as it did in the last. Investment in US start-ups grew to \$14 billion in 2012 and is continuing to snowball. 67% of its 18 to 30 year olds would prefer to work in start-ups than take corporate jobs — the smart kids do not aspire to work at the old universities or the major corporations any more. In stark contrast, only one in 15 Australian students aspire to start their own business.

"Australian universities are not declining in quality, but their international competition is developing at a much faster rate. A fall from 17 to 8 in the Top 200 Index in just nine years is a serious decline as domestic STEM enrolments stagnate at a time of their ever increasing importance."

- Prof Stephen Burdon -



A long list of businesses will soon be disrupted, as newspapers, music and publishing have been in the recent past. Everything from health, education and retail banking, telecommunications, taxes and transport to the sex industry will be transformed. The new digital economy will value skills in science, technology, engineering and mathematics (STEM), as noted by Australia's chief scientist. However, only 10% of Australia's students study STEM subjects at university, compared to 20% in the USA and UK and 40% in China. Without sufficient STEM skills, Australia will be ill-placed to take advantage of the opportunities generated by the next wave of change. Queensland is one state which has business, the university sector and the Government working together 'like a Swiss watch', but the rest of the country must follow suit.

Australia should encourage graduates to become entrepreneurs, just as Singapore has by insisting that entrepreneurship is studied as part of every business and technology courses. Prof Burdon also called for technology and entrepreneurship to be part of medical and all education training.

Coding, as well as computing, should become integrated into schooling at an earlier stage. Lucinda Barlow, head of Google marketing in Australia, believes the mandatory teaching of computer coding in school would be the single most effective step the Government could take to improve

schools, and while the Australian Government understands its importance, it is hard to drive change through the state-controlled system. Prof Burdon agreed with an earlier speaker that the problem of educational responsibilities under current federation arrangements was a problem which had to be solved.

American management expert Gary Hamel believes **innovation management and culture to be the biggest challenge of the decade**. Few Australian businesses and universities know how to create an innovative culture, although the knowledge exists. Universities remain hidebound by hierarchy, as opposed to the flat organisational structures in which innovation thrives. Australia also retains a rather patronising attitude towards Asia, thinking its role is to educate its neighbours, rather than learn from them where they are ahead of us. Incremental, radical and transformational changes all differ in their nature, but too few Australian businesses understand their different requirements.

A global PWC survey of chief executive officers found that 91% saw technology as the most significant transformational trend in their business. A McKinsey study of global CEOs found 61% directly engaged or personally sponsored digital business initiatives. Prof Burdon doubted whether as many Australian CEOs would say the same.



Higher education business models must also change. Australia's performance appears reasonable, with eight universities in the top 200, but it had 17 in the same index in 2005. Australian universities are not declining in quality, but their international competition is developing and improving at a much faster rate. In addition, domestic STEM enrolments have stagnated at a time when their importance is increasing.

Australia is also becoming less attractive for MBA students. There were 32,000 enrolments in 2005, 10,000 more than in 2012. Singapore, Hong Kong and Canada are all more favoured destinations for Asian students, and even Australian MBA students increasingly prefer Canada, Singapore or the USA as their place of study.

Traditional delivery models are also threatened by the growth of MOOCs. Anyone with an internet connection can now follow Harvard courses run by Nobel Prize winners for free, while Georgia Tech, one of the top ten technical universities in the world and ranked above any Australian institution in that regard, offers MOOCs and accreditation for just \$7,000.

There are many social benefits to attending an established university as students value the experience and interaction with other people, but hybrid models will increasingly combine traditional models with MOOCs. Although fears are expressed about tertiary education affordability in the light of government reforms, the cost of a hybrid degree for students is forecast to drop by 30% to 40% — which is good for students and governments, but worrying for universities. They face significant revenue losses and reduced demand for campus facilities.

Prof Burdon criticised the design, governance, structure and accountability of university councils. If Federal and State Government requirements and red tape are to be reduced, then councils need to be

held directly accountable for key performance indicators (KPIs) of quantifiable outcomes.

Currently, career academics' success primarily rests on the publication of citable publications, and Australia ranks 11th in that regard, but its academic output ranks a lowly 66th in terms of its impact on society. Australia stands 9th in investment in research and development, with the Australian Government spending almost \$9 billion a year, but is 32nd out of 33 high income nations in terms of its measurable community outcomes. New global knowledge of technology and management is generated as much in industry as in academia. However, poor links between universities and industry means that universities know well just 'half' of the new knowledge generated.

Prof Burdon called for the Australian education sector to **aim for excellence**, rather than just accepting their above average position in the league tables. Only excellence will attract foreign students and generate the skills required for Australians to compete in future global markets. Prof Burdon believed incremental change was not enough; though radical change is more risky, it is necessary to achieve excellence. Giving university councils more power will not improve performance if they do not reform themselves and reassess their priorities. They should publish annual targets and performance reviews of their teaching, research and administrative efficiency to offer comparisons with their overseas competitors.

It has been reported that Australian vice chancellors are the second best paid in the world. Indeed, many VCs would need to accept a pay cut to run Oxford University. Such salaries are difficult to justify if Australian universities continue their downward trajectory in world rankings.

Remuneration should be tied to KPIs to encourage performance, and published in annual reports.

VCs and senior academics are paid bonuses which are increasing year on year. These need to be published and linked to performance outcomes. As with ASX-listed organisations, the reporting of bonus criteria and the percentage achieved has led to improved performance.

Prof Burdon called for a greater emphasis on envisioned practical outputs when deciding the allocation of research and development grants. Quantifiable community outcomes are of relatively low priority to the Australian Research Council process, and therefore the Australian outcomes are more focused on global knowledge rather than local community benefits. A recent change in the UK now judges 30% to 40% of grant eligibility on community outputs and this has transformed the type of research undertaken. The overwhelming amount of paperwork required to gain funding should also be streamlined, as should the procedures for organising cross-facility courses.

In Australia, the number of administration staff represents 57% of total university staff. The most efficient employ 0.6 administrators per academic, compared with a ratio of 1.5 : 1 for the least efficient. If the Federal Government would reduce the red tape as forecast, efficiency savings could amount to several hundred million dollars.

Education cannot be viewed in isolation from the rest of society. Australia is falling behind in the wider digital economy, and its national plan for digital development needs improvement. The nation needs to agree bi-partisan goals for digital development which survive the electoral cycle, although political parties may differ on how these are best achieved.

Finland has made cell phone access a universal service obligation on its telecommunication companies, for example, ensuring access to all its citizens wherever they are in the nation. The British government produces more effective digital policy than Australia because it set up an authority to inform the debate.

As mentioned by other attendees, **Australia must do more to support its start-ups.** Israel offers \$170 of support per head of population, while Australia provides just \$4.70. Entrepreneurs can be attracted by tax concessions and networking opportunities. Universities could be asked to play a larger role in this sector. For example, the new UTS campus in Sydney offers an opportunity for academics to play an important role in helping to create a world class start-up hub. Government agencies have a good track record in digitising their operations, but should do more to outsource their services to encourage the growth of companies which can then expand domestically and overseas. Sonic Health, an ASX-listed pathology company, was created when a couple of local hospitals sought to outsource their pathology requirements. Today it is a \$7 billion company. Universities could pool their administrative activities or outsource them for cost and efficiency gains, as demonstrated overseas.

Prof Burdon called for a level-playing field, rather than its current strict approach to free trade, in relation to high-priority industries where government provides funds for research. For example, Australia should be a world leader in manufacturing solar panels, given its excellent university research. However, unlike other countries such as China, USA and Canada, Australia provided no help to its producers when market prices dropped below material costs. Now that we are left with a minimal local industry, this begs the question whether it is worth continuing to pour research funding into this area. How do we achieve community outputs worthy of the investment?

Australian universities still remain above world average, but their rate of relative international decline is worrying. Australia must embrace excellence and is running out of time to catch the next wave of the digital age.

Alan Castleman invited questions from audience, the first of which asked to what extent Australia should balance physical and virtual offerings to attract foreign students, given increasing international competition for its clientele.

In response, Prof Burdon said that although Australia can offer both types of delivery, a global approach is required for both domestic and international students. Australian universities can partner at home and abroad to offer MOOCs and compete more rigorously to drive up standards. Australian tertiary education cannot remain so self-absorbed, with high levels of bureaucracy and administrative costs and a follower to changing global needs. A culture of excellence needs to be fostered in all universities.

Mr Stephen Hayes MBE

**Chair, GAP Taskforce on Leadership in Education
Managing Director, Complexity Solutions
Chief Executive, Think2Impact**

Mr Hayes summarised the Summit's proceedings and thanked the Session Chairs and speakers for delivering such a rich experience for all. He thanked Dr Arzeni and reiterated the need to address Australia's high youth unemployment and low rate of apprenticeship completion compared to Germany. He thanked Minister Pyne for his clear explanation of government reform and reflected on the declining number of Australian universities in the world's top 200, given that education is Australia's third biggest export.

Recalling Mr Ruddock's warning that a long-standing emphasis on equality has encouraged a culture of mediocrity, Mr Hayes agreed that the

reforms offer a chance for renewal, and the exciting opportunities of the future should be grasped with both hands. He praised Suzette Young's record at Willoughby and thanked RADM Goldrick for his speech and contributions.

Mr Hayes revisited the disparities which persist in regional curricula despite the Australian Curriculum and lamented the lack of federal power to drive integrated and comprehensive progress. He urged the submission of a plea to the Federation white paper process calling for more federal influence on education.

He agreed that STEM enrolments should be encouraged, alongside efforts to help Australian children think systemically, as German children are through strategic games such as Ecopolis²¹. He thanked Peter Brooks for his talk on health policy and said Prof Steve Burdon's thought-provoking address should inform the GAP Taskforce on Leadership in Education. He also invited attendees to contact GAP with further suggestions.

Mr Hayes supported the creation of a further GAP taskforce to build on the Summit debate and hoped delegates had not only enjoyed the day's discussion, but would drive real change where they could in the future.





The next GAP Summit will be held on 17th and 18th September 2015 and will discuss employment.

Mr Hayes thanked the Hon. Anthony Roberts and his staff, the sponsors of the event and the GAP team and brought the Summit to a close.

LUNCH SESSION SUMMARY

- ▶ Australia must ‘catch the next wave of the digital revolution’, offer new skills to its workforce and rebuild its model of higher education to take advantage of exciting transformational times. The incipient disruption of traditional education models is an opportunity for ‘liberation, excitement and fun’, but Australia is falling behind its major competitors in today’s ‘intelligent software revolution’.
- ▶ There must be a renewed focus on the ‘STEM’ subjects of science, technology, engineering and mathematics in higher education and the teaching of computer coding skills in primary schools.
- ▶ Australian companies must embrace a culture of innovation, while public universities should offer a wider range of digital courses and undertake research of greater relevance to the nation’s economy. Australian education must aim for excellence to attract foreign students and generate the skills required to compete in future global markets.
- ▶ Incremental change will not be sufficient, and though radical change is more risky, it must now be embraced. An entrepreneurial spirit must be encouraged in students and professionals alike for Australia to prosper into the future.



THE STEERING COMMITTEE

The Steering Committee of business and government executives and academia worked for a year on the Summit's programme, goals and objectives, topics for discussion and a continuity strategy, to ensure outcomes are achieved beyond the event. The members of the Steering Committee for *National Economic Review 2014* were (*in alphabetical order*):

The Hon. Neil Batt AO

Executive Director
Australian Centre for Health Research

Ms Olga Bodrova

COO & Director of Research, GAP

Mr Simon Carr

General Manager and Vice President
Hewlett-Packard Australia

Mr Peter Dunne

Partner, Herbert Smith Freehills

Mr Peter Fritz AM

Group Managing Director, TCG Group

Mrs Catherine Fritz-Kalish

Managing Director, GAP

Mr Robert Griew

Associate Secretary, Higher Education
Research & International
Department of Education

Prof James Guthrie

Head of Academic Relations
Chartered Accountants Australia & New Zealand

Mr Stephen Hayes MBE

Chair, GAP Taskforce on Leadership in Education
Managing Director, Complexity Solutions
Chief Executive, Think2Impact

Mr Warwick Hearne

Chairman, DeltaPlan Financial Services

Ms Elaine Henry OAM

Chair, Australian Research Alliance
for Children & Youth
Chair, GAP Taskforce on Early Childhood Education

Mr Geraint Hudson

National Business Development
Manager, Corporate, Herbert Smith Freehills

Prof Don Markwell

Senior Advisor to the Hon. Christopher
Pyne MP, Minister for Education

Ms Lisa Middlebrook (Chair)

Executive Manager
GAP Annual Growth Summits

Mr Alok Ralhan

Director, The Strategy Associates

The Hon. Philip Ruddock MP

Chief Government Whip
Australian Government

Ms Edyta Wiatr

Assistant Project Manager, GAP

Ms Suzette Young

Principal Emeritus
Willoughby Girls High School

Mr Warwick Watkins AM

Chair, National Consultative
Committee on Security & Risk
Director, WW & Associates



PARTICIPATING ORGANISATIONS

100 delegates from the following **80 organisations** participated in *National Economic Review 2014* (for the full list of delegates, see App. 4, pp. 80-85):

- ▶ ACIL Allen Consulting
- ▶ Association of Catholic School Principles
- ▶ Association of Independent Schools of NSW
- ▶ Australian Catholic University
- ▶ Australian Centre for Health Research
- ▶ Australian Chamber of Commerce and Industry (ACCI)
- ▶ Australian Children's Education & Care Quality Authority
- ▶ Australian Institute of Music
- ▶ Australian Professional Teachers Association
- ▶ Australian Research Alliance for Children & Youth
- ▶ Australian Society for Progress & Wellbeing
- ▶ Australian Trade Commission (AUSTRADE)
- ▶ biT SYNERGY
- ▶ Business/Higher Education Round Table (B-HERT)
- ▶ Campus Morning Mail
- ▶ Charles Sturt University
- ▶ Chartered Accountants Australia & New Zealand
- ▶ Cognizant Technology Solutions
- ▶ Colman Foundation
- ▶ Complexity Solutions Pty Ltd
- ▶ Cooperative Research Centres Association
- ▶ CPA Australia
- ▶ Department of Education, Australian Government
- ▶ Department of Industry, Australian Government
- ▶ Distance Education Centre Victoria
- ▶ Doveton College
- ▶ Dragon Claw
- ▶ Dusseldorf Skills Forum
- ▶ Edith Cowan University
- ▶ Executive Solutions
- ▶ First 5000
- ▶ First Steps Count Inc.
- ▶ Flinders University
- ▶ Global Access Partners
- ▶ Global Mindset
- ▶ Herbert Smith Freehills
- ▶ Hewlett-Packard Australia
- ▶ Huddle
- ▶ HydroCon Australasia
- ▶ Innovative Research Universities
- ▶ intersective
- ▶ Kaplan Australia
- ▶ KWArts
- ▶ Macquarie University
- ▶ Management Frontiers Pty Ltd
- ▶ Mobile Learning Pty Ltd
- ▶ Monash University
- ▶ Moriah College
- ▶ MPL
- ▶ National Centre for Vocational Education Research
- ▶ National Standing Committee on Cloud Computing
- ▶ Navitas University Programs
- ▶ NewLearning
- ▶ NSW Resources and Energy
- ▶ OECD
- ▶ NSW Family and Community Services
- ▶ Office of Hon Christopher Pyne MP, Minister for Education
- ▶ Office of the Hon Anthony Roberts, Minister for Resources & Energy, NSW Government
- ▶ Open Colleges Australia Pty Ltd

- ▶ Open Forum
- ▶ Parliament, Australian Government
- ▶ PricewaterhouseCoopers (PWC)
- ▶ Qantas
- ▶ Regional Australia Institute
- ▶ Secondary Principals Council NSW
- ▶ Simulation Australia
- ▶ Sydney Distance Education Primary School
- ▶ TCG Group
- ▶ Technion Society of Australia
- ▶ Testing Times
- ▶ The Futures Project
- ▶ The Infants' Home
- ▶ The Royal Children's Hospital Melbourne
- ▶ The Strategy Associates Pty Ltd
- ▶ University of Melbourne
- ▶ University of New South Wales
- ▶ University of Technology, Sydney
- ▶ University of Wollongong
- ▶ Willoughby Girls High School
- ▶ WW & Associates Pty Ltd



APPENDICES

PROGRAMME

Day One – Thursday, 18 September 2014

		Strangers' Function Room, NSW Parliament House Macquarie St, Sydney
6:30pm _____	<i>Pre-Dinner Drinks, Registration</i>	
7:00pm _____	Dinner	Ms Lisa Middlebrook Executive Manager, GAP Annual Growth Summits
	Introduction	The Honourable Anthony Roberts MP NSW Minister for Energy & Resources
	Welcome Address	Mr Rob Ward AM Head of Leadership & Advocacy Chartered Accountants Australia & New Zealand
	Introduction	"From skills to employment in Australia: An OECD perspective" Dr Sergio Arzeni Director, Centre for Entrepreneurship, SMEs & Local Development, OECD
	International Guest Speaker	"Australian Society for Progress & Wellbeing" Mr Andrew Gale President, Australian Society for Progress & Wellbeing
	ASPW Launch	
9:25pm _____	Closing Remarks	Mrs Catherine Fritz-Kalish Managing Director, Global Access Partners
9:30pm _____	<i>Close</i>	

Day Two – Friday, 19 September 2014

		Macquarie Room, NSW Parliament House
8:15am _____	<i>Registration</i>	
8:55am _____	Welcome & Introduction	Ms Lisa Middlebrook Executive Manager, GAP Annual Growth Summits
	Keynote Address	The Honourable Christopher Pyne MP Leader of the House, Minister for Education, Australian Government
9:25am _____	SESSION ONE	"EXCELLENCE IN EDUCATION: HOW CAN AUSTRALIAN EDUCATION BE GLOBALLY COMPETITIVE?" "The future of education in Australia. National attitude to education" The Honourable Philip Ruddock MP Chief Government Whip, Australian Government
	Session Chair/Speaker	



	1 st Speaker	"Better educational outcomes: Start early" Prof Frank Oberklaid Founding Director, Centre for Community Child Health The Royal Children's Hospital
	2 nd Speaker	"Factors in school success: Policy and practice" Ms Suzette Young Principal Emeritus, Willoughby Girls High School
	3 rd Speaker	"Adult learning: Your right to continued education" RADM (Ret.) James Goldrick AO, CSC Adjunct Professor, School of Humanities & Social Sciences, UNSW
	DISCUSSION	
11:00am _____	<i>Morning Tea Break</i>	Speakers Garden, Parliament House
11:30am _____	SESSION TWO	"AUSTRALIAN EDUCATION IN THE CONTEXT OF A DEREGULATORY GOVERNMENT" RADM (Ret.) James Goldrick AO, CSC Adjunct Professor, School of Humanities & Social Sciences, UNSW
	Session Chair/Speaker	
	1 st Speaker	"Quality and opportunity in education" Mr Robert Griew Associate Secretary, Higher Education, Research & International Department of Education
	2 nd Speaker	"Regulatory challenges in a digital world. A case study: Educating for consumer engagement in health" Prof Peter Brooks AM Professorial Fellow, Centre for Health Policy School of Population & Global Health, University of Melbourne
	3 rd Speaker	"A new approach to educational disadvantage" Ms June McLoughlin Director, Family & Children's Services, Doveton College
12:35pm _____	DISCUSSION	
1:30pm _____	LUNCH	Members Dining Room, Parliament House
	Introduction	Mr Alan Castleman Chairman, Australian Centre for Health Research
	Speaker	"Digital disruption's impact on education" Prof Stephen Burdon Professor of Strategic Management & Technology Faculty of Engineering & Information Technology, UTS
	Q&A	
	Summary & Vote of Thanks	Mr Stephen Hayes MBE Chair, GAP Taskforce on Leadership in Education Managing Director, Complexity Solutions; Chief Executive, Think2Impact
3:00pm _____	Close	



SPEAKERS PROFILES

Dr Sergio Arzeni

**Director, Centre for Entrepreneurship,
SMEs and Local Development, OECD
Head of Programme, Local Economic and
Employment Development (LEED)**

Dr Sergio Arzeni is the Director of the OECD Centre for Entrepreneurship, Small and Medium-sized Enterprises (SMEs) and Local Development. The Centre oversees the work of the Local Economic and Employment Development programme (LEED), the Working Party on SMEs and Entrepreneurship, the Tourism Committee, and the OECD LEED Trento Centre for Local Development (Italy). Dr Arzeni has worked at the OECD for over 20 years. Prior to joining the OECD, Dr Arzeni served as an economist for the Italian Parliament, the Italian Trade Unions and the European Commission. As an economic journalist he has contributed to several Italian and international newspapers. He holds a First Class Honours Degree in Political Science from the University of Rome and specialised in Industrial Economics at the International University Institute of Luxembourg and in International Economic Relations at the Brookings Institution in Washington DC, USA. He speaks French, Spanish, English, German and Italian.

Prof Peter Brooks AM

**Professorial Fellow,
Centre for Health Policy,
School of Population & Global Health
University of Melbourne**

Professor Peter Brooks is currently a Professorial Fellow at the Centre for Health Policy - School of Population and Global Health University of Melbourne. He is the Executive Director Research at Northern Hospital Epping. Prof Brooks has held previous posts as Executive Dean of Health Sciences at the University of QLD, as Professor of Medicine at St Vincent's Hospital, Sydney (UNSW) and was the Foundation Professor of Rheumatology at the Royal North Shore Hospital and the University of Sydney. He completed his medical training at Monash University in Melbourne and studied rheumatology under Prof Watson Buchanan in Glasgow. He is a rheumatologist with a major research interest in the treatment and epidemiology of rheumatic diseases. Prof Brooks is a recognised international expert in the therapy of rheumatic diseases and has played a major role in the development of clinical trials methodologies in this area – both measuring efficacy and adverse events. He has published over 400 papers on the treatment and outcomes in arthritis, psychological aspects of rheumatic diseases and on medical education and health workforce. He recently completed reviews on carers and clinical placements for health professional students for HWA. Prof Brooks has a broad understanding of mobile technology advances including simulation and its ability to drive health workforce productivity. He has been a previous member of the Pharmaceutical Benefits Advisory Committee and has been a



member / Chair of Human Ethics committees at the Royal North Shore Hospital Sydney, Epworth Hospital and the Northern Hospital. He currently is a member of numerous medical boards and Chair of the Academic Board of the Australian College of Health. He has also has recently assumed Chair of the Patient Care Committee of Epworth Health.

Prof Stephen Burdon
Professor, Faculty of Engineering & Information Technology
University of Technology, Sydney

Steve is currently a Professor of Strategy Management and Technology at UTS and a Visiting professor at Cass Business School in the UK. His research interests are Corporate Strategy Innovation and Digital government policy. He is a Fellow of the Australian Institute of Company Directors, Australian Institute of Management (AIM) and the Institution of Engineers Australia. He previously held the position of Managing Director of OTC, Group Managing Director of Telstra and Managing Director of British Telecom, Asia Pacific. Steve has recently been advisor to a number of leading Australian companies, including Telstra, Westpac and Transfield and worked on government policy as an advisor for the Minister of Communications in Australia and UK. Steve has held over a dozen chair and director positions. These have included: Transfield Services Ltd, Silex Systems Ltd and Data Advantage Lt and private companies such as Clear Communications NZ, Mahindra/BT India and NIS (Japan). He is currently a director of VisAsia, Criteria Research and on the advisory boards of UTS Centre of Management and Organisation Studies and Chair of the Australian Institute Management Academic Board.

Mr Alan Castleman
Chairman
Australian Centre for Health Research

Mr Castleman is a professional director with significant experience in the health, aged care and investments sectors, as well as manufacturing, resources, transport and infrastructure, having served as Chairman of 15 companies in a total of some 25 boards over recent years. He currently also chairs the Australian Centre for Health Research Ltd, an independent industry funded think tank, which collaborates with Global Access Partners (GAP) in certain activities. Since late 2006, Mr Castleman has also been an executive director and principal with the Board Advisory Group (formerly ProNed Victoria Pty Ltd), involved in Board Search and advisory services. Qualified in engineering and commerce, he had a previous 24 year executive career with BHP.

Ms Catherine Fritz-Kalish
Managing Director
Global Access Partners

Catherine Fritz-Kalish is co-founder and Managing Director of Global Access Partners Pty Ltd (GAP). She oversees most of the organisation's marketing and sales functions, as well as the day-to-day operations of the business. She is responsible for effective planning, delegating, coordinating, staffing, organising and decision making. Over the last 12 years, under Catherine's guidance, GAP has grown to be a proactive and influential network which initiates high-level discussions at the cutting edge of the most pressing commercial, social and global issues of today. Through forums, global congresses, annual summits and government advisory boards, GAP facilitates real and lasting change for its stakeholders, partners and delegates by sharing knowledge and creating input for government policy. Over the past few years, GAP has established a number of national consultative committees which are working to shape



the face of the Australian business and policy environment. Catherine's broader business experience includes coordination of a number of international initiatives as part of the annual programme for the small and medium sized enterprise unit of the OECD at headquarters in Paris, France; marketing and brand management within all seven divisions of the George Weston Foods Group; and just prior to establishing GAP, working within the TCG Group of companies particularly in the area of startup incubator establishment. Catherine holds a bachelor of science degree from the UNSW and a Masters of Business in International Marketing from the University of Technology, Sydney. She is a mother of three children and is passionate about helping those less fortunate through the not-for-profit business she co-founded, Thread Together, which provides brand new clothing to those in need across Australia.

Mr Andrew Gale
President
Australian Society for Progress & Wellbeing

Andrew has over 30 years' experience in the financial services industry. Currently he is Executive Director with Chase Corporate Advisory. Previously he held various Executive roles with Count Financial Ltd, Deloitte Actuaries & Consultants, MLC and AMP. Andrew was formerly President of the Australian Institute of Actuaries and served on the Executive Committee. He is Vice Chairman of the SMSF Professionals Association of Australia. He is also a member of the NAB Advice & Licences Board. He has been strongly involved in the not-for-profit sector, particularly through various Global Access Partners initiatives, including the Australian Government Consultative Committee on Knowledge Capital, the Working Group on Education and Training in Philanthropy and Social Investment, the Society for Knowledge Economics (Founding Director) and the 2011 GAP Taskforce on Progress in Society.

RADM (Ret.) James Goldrick AO, CSC
Adjunct Professor
School of Humanities & Social Sciences
University of New South Wales

James Goldrick is an Adjunct Professor in the School of Humanities and Social Sciences. He joined the Royal Australian Navy as a 15 year old Cadet-Midshipman in 1974 and retired in 2012. He is a graduate of the RAN College, the Harvard Business School Advanced Management Program, the University of NSW (BA) and the University of New England (Master of Letters). He commanded HMA Ships Cessnock and Sydney (twice), the RAN task group and the multinational maritime interception force in the Persian Gulf (2002) and the Australian Defence Force Academy (2003-2006). As a Rear Admiral, he led Australia's Border Protection Command (2006-2008) and then commanded the Australian Defence College (2008-2011). August 2011 to March 2012 saw him acting in command of ADFA again. He is currently a Visiting Fellow of the Sea Power Centre-Australia, a Visiting Fellow of the Lowy Institute and a Professorial Fellow of the Australian National Centre for Ocean Resources and Security at the University of Wollongong. James Goldrick has contributed to many international journals and books on both historical and contemporary naval subjects. His research interests include naval and maritime strategic issues and the development of naval capabilities in the Indo-Pacific, as well as world navies in the twentieth and twenty first centuries, with a focus on their response to changing technologies and operational challenges. His own books include: *The King's Ships Were at Sea: The War in the North Sea August 1914 - February 1915* and *No Easy Answers: The Development of the Navies of India, Pakistan, Bangladesh and Sri Lanka. Navies of South-East Asia: A Comparative Study*, co-authored with Jack McCaffrie, was published by Routledge in September 2012. He co-edited *Reflections on the*



Royal Australian Navy and Mahan is not Enough. He has contributed, amongst other works, to The Great Admirals, The Oxford Illustrated History of the Royal Navy, The Royal Australian Navy, A Nation's Navy: In Quest of Canadian Naval Identity, Skaggerakschlacht, Dreadnought to Daring, Naval Power in the Twentieth Century, Naval Blockades and Sea Power, Naval Coalition Warfare and 1918 Year of Victory. He has also contributed to both the Australian Dictionary of Biography and the UK Dictionary of National Biography. He received a Doctorate of Letters honoris causa from the University of NSW in 2006.

Mr Robert Griew
Associate Secretary
Higher Education, Research and International
Department of Education
Australian Government

Robert Griew is the Associate Secretary, Higher Education, Research and International, at the Department of Education. Robert has a distinguished career spanning the public, private and not-for-profit sectors. Robert spent the first 28 years of his career focused on health and community services, including four years as Secretary of the Northern Territory Department of Health and Community Services, and senior positions in New South Wales and Victoria. He spent more than 10 years managing Commonwealth health and community services, including running the Commonwealth aged care and Aboriginal health programmes. He has run his own consulting business doing both technical and organisational development work and held senior positions in the community health sector. Robert moved to the education sector in 2008 and, prior to joining the department as part of the 2013 Machinery of Government changes, has been responsible for labour market strategy, tertiary education and Indigenous employment programmes. He has previously chaired

ministerial advisory councils including the National Public Health Partnership, and most recently the National Senior Officials' Committee supporting tertiary education ministers. Past directorships include the National Centre for Vocational Education and Research, the National Health Advisory Council, the New South Wales Legal Aid Commission and Australian Hearing. Robert has a bachelor's degree in health science and education, a master's degree in public health and a graduate economics degree from the Australian National University.

Mr Stephen Hayes MBE
Chair, GAP Taskforce on Leadership in Education
Managing Director, Complexity Solutions
Chief Executive, Think2Impact

Stephen Hayes MBE is the Managing Director of Complexity Solutions and is internationally recognised as the founding Managing Director and Chief Executive of the International Centre for Complex Project Management. He is also the Chair of the International Task Force that developed the internationally acclaimed report 'Complex Project Management – Global Perspectives and the Strategic Agenda to 2025' and the founding Chair of the International Complex Project Management Research Council. Building on his extensive industry expertise, Stephen established Complexity Solutions to support government and industry in the successful delivery of complex endeavours including the practical use of innovations in systems sciences as well as capacity building for the delivery of complex projects and programs. As Chief Executive of Think2Impact, Stephen supports development of a global platform for applied systems thinking, specifically designed and developed to help global operations take a holistic approach to complex problem solving and sustainable solution delivery. Through his extensive work in international communities,



government agencies and high profile organisations throughout Europe, Brazil, China, Russia, North America and Africa, Stephen has become internationally recognised as a leader in the fields of complexity and program management. He has overseen complex program management advice and support to numerous organisations including the UK Ministry of Defence, Hitachi Rail, the Canadian Department of National Defence, the Australian Department of Defence, Air Services Australia, Australian Aerospace, Victoria Police, BAE Systems, Lockheed Martin, Thales and Boeing. Stephen is currently Chair of the Global Access Partners Task Force for Leadership in Education. He is also Chair of a consortium working with the Seychelles Government and World Bank to establish a Pan African Business School for complex program capacity building across the African Continent and Indian Ocean rim. Complementing his Masters of Management degree, Stephen is a graduate of the Defence Command and Staff Course and served in the Royal Australian Air Force for 29 years. During this tenure he held military command as well as serving posts in program management, systems engineering and human resource management. His project management exchange with the United Kingdom's Royal Air Force was formally recognised with the honour of being made a Member of the Order of the British Empire. Stephen has also been awarded the United States Defense Acquisition University President's Medal for international leadership in the field of complex project management. He is also a Fellow of the Institute for Systems Wisdom and is sought after as a keynote speaker at international conferences and universities where he enjoys engaging with the complex project management community. Stephen also provides strategic advice as a member of a number of corporate boards.

Ms June McLoughlin

**Director, Family & Children's Services
Doveton College**

June has expertise in service and policy development within early childhood education and care, disability, parenting and family support fields. For many years June worked within the Victorian State Government and at the Centre for Community Child Health, Royal Children's Hospital managing a variety of national and state-based projects designed to refocus early years services and provide support to practitioners to deliver more integrated evidenced-based services for families of young children. Currently June is leading the establishment of a fully integrated Family and Children's Service within the context of a major public/private partnership school redevelopment in Victoria. The school campus includes a wide range of programs and supports families in the Doveton community from the prenatal period to Year 9 secondary. June has extensive experience working in partnership with philanthropy and sits on a number of community boards and committees. June is the past Board member of the Australian Children's Education and Care Quality Authority. She is currently a board member for Early Learning Associations Australia, The Queen Elizabeth Early Parenting centre and is a member of the Victorian Community Sector Reform Ministerial Council.

Ms Lisa Middlebrook

**Executive Manager
GAP Growth Summits**

Lisa Middlebrook is Executive Manager for Policy and Strategy at GAP. She is responsible for policy and programme development and external relations for many GAP projects. Within this role she manages GAP's annual economic summit and helps guide several of GAP's ongoing taskforces. In this capacity, Lisa also serves as the



Deputy Chair of the National Standing Committee on Cloud Computing. Prior to assuming her role at GAP in September 2009, Lisa spent two years as a Director of the Federal ALP, while there establishing the Federal Labor Business Forum, and handling external relations and business affairs. Immediately prior to that, she served as the Director of Business Development at the Lowy Institute. In addition, Lisa has an extensive background in the non-profit sector, and she spent three years as the CEO of the Johnny Warren Foundation. Lisa spent six years with the Democratic Leadership Council (DLC) and Progressive Policy Institute in Washington DC where she was a Senior Adviser on trade policy and was also responsible for external relations with the corporate community and non-profit foundations. She was instrumental in helping establish political relationships for Australia with regard to the US/Australia Free Trade Agreement. Prior to the DLC, she served at the Australian Embassy in Washington working on US Congressional Relations and trade issues. Lisa is a graduate of the University of California Los Angeles (political science and international relations) and volunteers with several charities including the Steve Waugh Foundation.

Prof Frank Oberklaid
Founding Director
Centre for Community Child Health
The Royal Children's Hospital
Melbourne

Professor Frank Oberklaid OAM, MD, FRACP is the Foundation Director of the Centre for Community Child Health at The Royal Children's Hospital, Co-Research Group Leader (Policy, Equity and Translation) at the Murdoch Childrens Research Institute and an Honorary Professor of Paediatrics at the University of Melbourne. Professor Oberklaid is an internationally recognised researcher, author,

lecturer and consultant and has written two books and over 200 scientific publications. His work has been acknowledged in the form of a number of prestigious awards and many invited international lectureships and visiting professorships. He is Chair of the Victorian Children's Council, which advises the Premier and Ministers on child health policy, and chairs or is a member of several important national policy committees. He is especially interested in prevention and early intervention, and the use of research findings to inform public policy and service delivery.

The Hon. Christopher Pyne MP
Leader of the House
Minister for Education
Australian Government

Christopher Pyne was elected to the House of Representatives for the seat of Sturt in 1993. Christopher is the Minister for Education and Leader of the House of Representatives. In his time in Parliament he has been Shadow Minister for Education, Manager of Opposition Business in the House of Representatives, Shadow Minister for Justice, Minister for Ageing, Assistant Minister and Parliamentary Secretary for Health and Parliamentary Secretary to the Minister for Family and Community Services. Before entering Parliament, Christopher practised as a solicitor. Christopher is married to Carolyn and is the father of Eleanor, Barnaby, Felix and Aurelia.

The Hon. Anthony Roberts MP
Minister for Resources and Energy
NSW Government

The Hon. Anthony Roberts MP is the NSW Minister for Resources and Energy, and Special Minister of State. Elected as the Member for Lane Cove in 2003, Anthony previously served as the Minister for Fair Trading from March 2011 to December



2013. Prior to becoming a Member of the NSW Parliament, he served as Mayor of Lane Cove Municipal Council and was an advisor to former Prime Minister John Howard. A former Captain in the Australian Army Reserves, Anthony proudly served in peace keeping operations in Bougainville as part of Operation Bel Isi.

**The Hon. Philip Ruddock MP
Chief Government Whip
Australian Government**

Philip Ruddock was first elected to the House of Representatives as the Member for Parramatta, New South Wales, at a by-election on 22nd September 1973. Since 1992 until the present he has held the seat of Berowra. The electorate of Berowra blends high-density suburban areas with a semi-rural fringe. Having held a number of Shadow Ministry portfolios Mr Ruddock was appointed Minister for Immigration and Multicultural Affairs from 11th March 1996 through to 7th October 2003. This made him the longest serving Federal Immigration Minister. During this period he also had responsibility for Reconciliation and Aboriginal and Torres Strait Islander Affairs. On 7th October 2003, he was sworn in as the Federal Attorney-General, an appointment he held until the Federal Election on 3rd December 2007. He has wide committee experience, having served on the Joint Standing Committee on Foreign Affairs, Defence and Trade; the Joint Standing committee on Intelligence and Security; Coalition Foreign Policy and Defence Committee; and Coalition Legal and Immigration Committee. With degrees in Arts and Law from Sydney University Mr Ruddock practised law prior to entering parliament. He resides in Pennant Hills, in the heart of his electorate with his wife. The couple has two adult daughters Kirsty and Caitlin.

**Mr Rob Ward AM
Head of Leadership & Advocacy
Chartered Accountants Australia & New Zealand**

As Head of Leadership and Advocacy, Rob is responsible for leading the Chartered Accountants Australia and New Zealand's policy team across a wide range of disciplines that impact businesses and the broader economy. He has over 40 years of experience working in accountancy practice, regulation and various board roles. Rob has previously held responsibility as Chairman of the Australian Public Policy Committee and board member of the Public Interest Oversight Board based in Madrid — the body charged with the independent oversight of the development of international standards of auditing, ethics and education. He has also served as a member of an Advisory Board to the Australian Statistician on their program of 'Measures of Australia's Progress'. Prior to joining the Chartered Accountants Australia and New Zealand Rob was the PwC worldwide audit leader which covered 78,000 people across 148 countries. A Fellow of the Institute of Chartered Accountants Australia, Rob has a Bachelor of Commerce in Accounting, Finance and Systems from the University of New South Wales and was admitted as a Member of the Order of Australia in 2005.

**Ms Suzette Young
Principal Emeritus
Willoughby Girls High School**

Under Suzette's leadership Willoughby Girls High School has enjoyed a strong focus on academic learning, culminating in the school being placed first among NSW state comprehensive high schools on the basis of top end HSC results in 2007, 2008 and 2012, and in the last year, first among all NSW high schools, state and private, in advanced English. The school was awarded in 2009 the Director-General's Award for Leading Girls Education in Achieving Academic Excellence. In 2012 The Sydney Morning Herald, The Daily Telegraph, The North Shore Times and Radio



2GB recognised Suzette's leadership role in the school's consistently excellent performance. With 38 years in education, Suzette has served as principal, deputy principal-leading teacher, head teacher and teacher in the northern, western and south western regions of Sydney, in single sex and co-educational schools, with advantaged, disadvantaged and culturally diverse communities. She has represented NSW on tours of China, Korea and Taiwan promoting public education to the international market. Suzette's career includes extensive periods as Member of the NSW Board of Studies, Deputy President of the NSW Secondary Principals Council, Supervisor of HSC English Marking, President of the NSW English Teachers Association and Lecturer in Teacher Education at Macquarie University where she prepared English and ESL teachers for both the public and private sectors and taught Linguistics to undergraduate students. She holds a BA and MA from the University of Sydney.



SPONSORS PROFILES



The Australian Centre for Health Research's vision is for an open and receptive health sector in which important issues affecting the delivery of health and healthcare to Australians are considered from a broad range of perspectives.

This will contribute to a healthy Australia whose citizens receive world-leading, affordable healthcare from an efficient and effective mix of the public and private healthcare sectors.

The Australian Centre for Health Research was established to fill a gap in the health environment. In establishing ACHR we were aware that there was no organisation which existed specifically to raise the level of public discussion on health issues, which had a commitment to the private sector within the context of the Australian dual public and private system. We seek to have sensible, non-ideological positions become part of the continuous health debate with a determination to have sensible policies adopted.

The ACHR's current supporters include representative organisations from the health sector including health funds, aged care, private hospitals, the Pharmacy Guild and Dental Association and those interested in improving the health landscape in Australia.

In recent years the ACHR has produced papers in the areas of connected health care, risk equalisation in health, pharmacogenomics, the impact and cost of health sector regulation, structural barriers to reform of the Australian health system and lessons for the Medicare system. Each of these papers has received useful public interest and assisted in informing the health dialogue in Australia.

In 2011, the ACHR published a book of essays, "*Health Care in Australia: Prescriptions for Improvement*", covering various aspects of the Australian health system.

Future projects include a workshop on connected care, a research paper into productivity in the health sector, electronic health research and discussion, and other events focussed on promoting discussion in the health area.

www.achr.com.au



Australian Government
Department of Education

The Australian Government Department of Education is responsible for national policies and programmes that help Australians access quality and affordable childcare; early childhood education; school education; post-school; higher education; international education, and academic research.

www.education.gov.au



CHARTERED ACCOUNTANTS
AUSTRALIA + NEW ZEALAND

Chartered Accountants Australia and New Zealand is made up of over 100,000 diverse, talented and financially astute professionals who utilise their skills every day to make a difference for businesses the world over.

Members of Chartered Accountants Australia and New Zealand are known for professional integrity, principled judgment and financial discipline, and a forward-looking approach to business.

We focus on the education and lifelong learning of members and engage in advocacy and thought leadership in areas that impact the economy and domestic and international capital markets.

We are represented on the Board of the International Federation of Accountants, and are connected globally through the 800,000-strong Global Accounting Alliance and Chartered Accountants Worldwide which brings together leading Institutes in Australia, England and Wales, Ireland, New Zealand, Scotland and South Africa to support and promote over 320,000 Chartered Accountants in more than 180 countries.

Chartered Accountants Australia and New Zealand is a trading name for the Institute of Chartered Accountants in Australia (ABN 50 084 642 571) and the New Zealand Institute of Chartered Accountants.

www.charteredaccountantsanz.com



Cognizant (NASDAQ: CTSH) is a leading provider of information technology, consulting, and business process outsourcing services, dedicated to helping the world's leading companies build stronger businesses. Headquartered in Teaneck, New Jersey (US), Cognizant combines a passion for client satisfaction, technology innovation, deep industry and business process expertise, and a global, collaborative workforce that embodies the future of work.

With over 75 development and delivery centers worldwide and approximately 187,400 employees as of June 30, 2014, Cognizant is a member of the NASDAQ-100, the S&P 500, the Forbes Global 2000, and the Fortune 500 and is ranked among the top performing and fastest growing companies in the world. You can follow us on Twitter: @Cognizant.

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Edith Cowan University (ECU) is a large, multi-campus institution serving communities in Western Australia and internationally. At ECU we are guided by the values of integrity, respect, rational inquiry and personal excellence. Established in 1991, ECU has grown rapidly into a quality university with excellent student satisfaction with focus on teaching and research.

ECU produces research at exacting international standards that extends knowledge and improves the quality of life for Australians and people around the world by focusing on solving real problems across the social, economic, physical and environmental spectrums.

Students and graduates at ECU are identified amongst the best in the world, with many fulfilling critical roles in our society. Their outstanding achievements have been recognised throughout Australia and internationally through awards, grants, scholarships and prizes.

ECU is committed to breaking down barriers that restrict entry to education through enhancement and development of alternative entry pathways into higher education.

In collaboration with the Emirates Group, ECU has established the ECU-Emirates Centre of Aviation & Security Studies (CASS) in Dubai for the delivery of specialised programs and research. Through this alliance, ECU has positioned itself as one of the pioneers in enhancing education standards for the global aviation industry. The programs are affiliated with the International Civil Aviation Authority.

ECU's collaboration with the Emirates Group was recognised by a 2006 Business/Higher Education Round Table (B-HERT) award for Best International Collaboration - Education and Training - Enhancing Security in an Increasingly Interdependent World.

Since the establishment of the partnership in 2003, CASS has graduated over 1,100 students with ECU diplomas.

www.ecu.edu.au



Centre of Aviation & Security Studies

The Centre of Aviation and Security Studies (CASS) is an integral business unit of the Emirates Group Security (EGS) with the prime focus on research and education. CASS is strategically positioned at the EGS Head Quarters in Dubai with state-of-the-art infrastructure and operational scope spanning Australia, Canada and South East Asia.

CASS is run in close partnership with ECU and provides high-quality, university-affiliated academic courses in Aviation Security, Private/Public Security, Border Control, Aviation Operations and Ground Handling.

CASS has developed strong alliances with leading international Universities, Immigration and Law Enforcement agencies from around the world, and these partnerships provide unique synergies to CASS in developing focused research initiatives and industry driven education programs certified by ECU.

CASS provides a range of educational options and is the home for delivering various diploma programs offered by ECU, which include the Diploma in Aviation Security Management and the Diploma in Ground Handling. Apart from the tertiary courses, CASS also offers short courses in Aviation Security, Cargo Security, Forgery Detection, Profile Screening, Crisis Management and many more. In addition to its education services, CASS is also developing into a regional hub for research in security and aviation.

CASS works closely with international organisations such as the International Civil Aviation Organization (ICAO), International Professional Security Association (IPSA), General Civil Aviation Authority (GCAA) and American Society for Industrial Security (ASIS) to enhance their programmes.

www.emiratesgroupsecurity.com



GAP is a not-for-profit public policy network based in Sydney that is comprised of government, industry, academia and community leaders across Australia and around the world. Established in 2000, GAP specialises in new approaches to public policy development and the facilitation of government / industry / community interactions on the most pressing social, economic and structural issues and challenges across a broad range of Australian economic sectors.

Through its pioneering '*Second Track*' Process programme of initiatives, GAP seeks to foster links between community, government and academia to streamline the process of 'fast-tracking' solutions to key issues, increase stakeholder participation in policy formation and decision making, and develop novel, cross-disciplinary approaches to regulatory problems by engaging key stakeholders in high-level discussions and research.

GAP's diverse initiatives and ventures include long-term programmes and one-off projects in regulation and public policy, industry policy, healthcare, knowledge capital, innovation, information and communication technology, security and privacy, sustainability and climate change, education, deliberative democracy, and philanthropy and social investment, to name a few.

GAP runs national and international conferences, multidisciplinary forums and executive roundtables, coordinates community and stakeholder research projects and feasibility studies, and oversees pilot projects to trial new business ideas. GAP's online think-tank, Open Forum, is a well-established online platform with an extensive community network, uniquely positioned to attract and engage target audience and informed contributions.

GAP's partners include Federal and State governments, major corporate enterprises and industry bodies. Every dollar invested by government in GAP initiatives leverages two dollars from the private sector.

www.globalaccesspartners.org



HP creates new possibilities for technology to have a meaningful impact on people, businesses, governments and society. With the broadest technology portfolio spanning printing, personal systems, software, services and IT infrastructure, HP delivers solutions for customers' most complex challenges in every region of the world.

Commitment to education

To employ more people and create more jobs, HP came up with a simple idea: provide aspiring entrepreneurs training in essential IT and business skills using HP technologies. HP's vital partnerships with the educational organisations EDC, ORT and UNIDO and local training partners in 49 countries support this program worldwide. HP LIFE has already touched over 1.2 million entrepreneurs and social innovators, with face-to-face training, online activities and access to IT.

Through the program HP empowers entrepreneurs with free, online access to high-quality educational resources to help learn or sharpen business and IT skills on their own time, at their own pace.

HP was able to design an open-platform, interactive, online learning curriculum accessible to virtually anyone, anywhere to facilitate this.

HP LIFE e-Learning curriculum is self-paced and includes core business categories such as communications, finance, marketing, and operations along with special topics including social entrepreneurship and energy efficiency. Modules are added and updated constantly, with the learning experience enhanced by an online community of like-minded people, tips, resource links and forums offered to students.

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Herbert Smith Freehills are delighted to have the opportunity to take part in this year's Global Access Partners (GAP) Annual Growth Summit.

We are proud to participate and support GAP's vision to bring together a diverse group of individuals to provoke thoughtful discussion on topical social issues facing Australians and the wider economy community.

Changes in the education sector impact both our clients and members of the broader HSF community. Investing in programs which shape the development of government policy provides us with the unique opportunity to be involved in the gestation of new ideas that expose the sector to both new commercial opportunities and risks.

As a global law firm, we are consistently recognised as a leading team in capital markets, mergers and acquisitions, dispute resolution and other key areas of commercial legal services. We are focused on ensuring commercial outcomes for our clients and delivering a premium service and exceptional client experience.

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Open Forum (www.openforum.com.au) is an independent, interactive online community focused on the issues which matter to Australia's public policy debate.

Initiated by Global Access Partners (GAP) in July 2007, our bloggers and readers includes people of all ages, from all over Australia and from all political spheres. Open Forum's network features senior business executives, government policy makers, academics, thought leaders and community advocates, as well as interested private citizens.

Open Forum is staunchly non-partisan. We believe this independence is fundamental to the success of any policy development forum. Our user-generated content allows us to explore areas which are of relevance to the regulatory process, track citizen sentiment around particular issues and use these as the basis for briefing notes and recommendations to government agencies.

Speeches, related blogs, articles and updates on the outcomes from the Summit are highlighted on Open Forum in a special Education forum,
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ENDNOTES

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- ² The OECD's Programme for International Student Assessment (PISA) is a triennial international survey which aims to evaluate education systems worldwide by testing the skills and knowledge of 15-year-old students. To date, students representing more than 70 economies have participated. The most recently published results date from 2012.
- ³ The H-1B is a non-immigrant US visa which allows U.S. employers to temporarily employ foreign workers in specialty occupations such as biotechnology, chemistry, architecture, engineering, mathematics, physical sciences, social sciences, medicine and health, education, law, accounting, business specialties, theology, and the arts. The foreign worker must have a bachelor's degree or its equivalent and state licensure, if required to practice in that field. H-1B work-authorisation is strictly limited to employment by the sponsoring employer.
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