NSW International Education and Research

Industry Action Plan

Issues Paper
INTRODUCTION

This paper is the first step of an ongoing dialogue with stakeholders to identify opportunities and challenges to local industry competitiveness and innovative capacity. Specifically this will inform the development of a 10-year Industry Action Plan (IAP) to support both the growth of the international education and research industry as well as its broader contribution to the overall competitiveness of the NSW economy.

The Taskforce is seeking industry and expert input to help it deliver on its Terms of Reference.

Terms of Reference

By September (unless otherwise agreed), the Industry Taskforce will submit to the Deputy Premier an Industry Action Plan that:

1. Outlines a vision and 10 year development strategy for the industry, including 2 year and 5 year goals.
2. Articulates a way forward to achieve the vision, including priority issues to be addressed (including, but not limited to: skills, regulations and regulatory barriers at all levels of government, innovation and productivity, R&D, infrastructure and policy reform)
3. Proposes ways to build stakeholder engagement and commitment in delivering long-term industry development needs
4. Identifies drivers for and barriers to growth and innovation in the industry (including those caused by Government practices, as well as identifying specific issues facing regional businesses and SMEs)
5. Identifies and validates the key domestic, Asia-Pacific and global trends, opportunities and challenges for the industry's development
6. Identifies opportunities for rural and regional Australia and small business to engage in, and take advantage of opportunities arising from the International Education and Research industries
7. Develops detailed recommendations to be undertaken by industry, industry associations, educational and research institutions, and Government to encourage sector competitiveness, enhance productivity and innovation, improve export performance and, where required, facilitate structural adjustment (including rationale of the strategies and actions proposed)
8. Identifies key performance indicators, progress and outcome metrics, clear benchmarks and timeframes for major initiatives to be included in the Industry Action Plan
1. INDUSTRY ACTION PLAN - VISION AND SCOPE

The NSW 2021 State Plan identifies a number of targets and priority actions in critical industries including the international education and research sector.

International education is NSW’s second largest export industry, generating over $5.8 billion in the 2010/11 financial year. The State’s international education industry is also the largest in Australia, comprising of 37.3 per cent of total national enrolments.

The International Education and Research (IER) Industry Action Plan (IAP) develops a ten-year strategy for the industry, including 2 year and 5 year goals.

What is your vision for this sector?

By 2020:

- NSW delivers cutting edge, industry-relevant education that launches international students into careers of choice.
- NSW education is regarded in our key markets as one of the best life and career decisions for international students.
- NSW universities are linked into leading global industry and research networks to develop world class talent and commercialise world class research.

The International Education and Research (IER) IAP will focus on:

- **Education exports**: increasing exports from the Vocational Education and Training (VET), University, higher education, secondary schools and associated services sector, including both public and private providers. Consideration will include high-quality standards of education delivery to international students, increasing the physical presence of education providers in NSW and international promotion of the NSW education industry.

- **Developing and enhancing international education, research and industry precincts**: focusing on further establishing Sydney as an international university city and attracting international partners to invest and locate in NSW in education and research precincts. It will include the establishment of institutional research and collaboration partnerships, including with industry.

- **Innovation in education delivery**: focusing on mechanisms for digital and online delivery of education across NSW and internationally and will be developed in line with the Digital Economy Industry Action Plan and through linkage with national and international education programs.
2. INDUSTRY PROFILE

In 2010, the international education industry comprises:
- Higher education - 36.6 per cent of total international student enrolments in NSW
- Vocational Education and Training (VET) – 35.6 per cent
- English Language Intensive Courses for International Students (ELICOS) - 19.9 per cent
- Schools - 3.9 per cent.
- Together these sectors in 2010/11 earned NSW over $5.8 billion in export income.

The higher education sector
- The higher education sector is dominated by the public sector, with eleven public universities within NSW. Public higher education providers account for over 83 per cent of higher education international student enrolments within NSW in 2010.
- In 2010, the number of international student enrolments to NSW higher education institutions was 84,408.
- NSW market share for international student enrolments in the higher education sector in 2010 was 34.8 per cent of total Australian enrolments, down from the over 36 per cent market share per year between 2005 and 2007.

Vocational Education and Training (VET)
- Unlike the higher education sector, the NSW and national VET sector is dominated by private sector providers, far outstripping the public sector in terms of student enrolments, with a market share of 92.8 per cent in NSW. The VET sector has also been the fastest growing sector in the international education industry.
- In 2010, the number of international student enrolments to NSW VET institutions was 81,978.
- NSW market share for international student enrolments in the VET sector in 2010 was 39.9 per cent of total Australian enrolments, a decrease of 1.5 per cent from 2009.
- This continues a loss of VET market share to other States since 2005, with NSW VET market share then 55 per cent. Since 2005, Victoria’s share has increased from 24.7 per cent to 33.7 per cent in 2010 and Queensland from 10 per cent to 14.5 per cent in 2010.

English Language Intensive Courses for Overseas Students (ELICOS)
- ELICOS courses provide English language education to international students who want to study in Australia or wish to improve their English.
- ELICOS providers are dominated by the private sector, with over 73.1 per cent of international students enrolled in private provider ELICOS courses nationally in 2010. This percentage is even higher in NSW, with 84.3 per cent of international student enrolments in private ELICOS courses in 2010.
- In 2010, the number of international student enrolments to NSW ELICOS institutions was 45,950.
- NSW market share for international student enrolments in the ELICOS sector in 2010 was 40.4 per cent of total Australian enrolments, a 1.3 per cent increase over 2009, but still a decrease over the highs experienced between 2006 and 2008 (41-42 per cent).
- Despite the decreases, NSW has remained relatively stable, as has the rest of the nation with Victoria and Queensland having 22.7 per cent and 21.3 per cent of the ELICOS market in 2010.
Schools

- NSW market share for international student enrolments in the school sector in 2010 was 28.7 per cent of total Australian enrolments, a 2.4 per cent decrease over 2009, but still a decrease over the highs experienced between 2005 and 2009 (31-33 per cent).
- In 2010, the number of international student enrolments to NSW school institutions was 6,935
- NSW market share for international student enrolments in the school sector has seen a significant decrease since 2005 nationally, with schools accounting for over 7.3 per cent in 2005 compared with 3.9 per cent in 2010.

Research strengths in NSW

- NSW has the largest research sector Australia, with one of its universities ranked in the top 100 in the world, with six NSW universities in the top 500 of the Academic World Ranking of Universities index.
- NSW demonstrates excellence in a number of education and research disciplines, including the physical sciences, mathematics, engineering, business, economics and social sciences.
- More than 60 Australian Research Council (ARC) Centres of Excellence and Collaborative Research Centres (CRCs) have a presence in NSW, including the headquarters of 12 ARC Centres of Excellence and 11 CRCs in NSW.

A more detailed industry profile is provided at Appendix A.
3. INDUSTRY TRENDS

1. The Asian Century presents both challenges and opportunities

In the Asian Century, NSW is positioned to leverage its education strengths, delivering world class training to the fastest growing economies in the world.

- How can industry and government work together to capture these opportunities?
- How long is this window of opportunity open and what action is required within the next one to five years to establish a dominant position in these markets?

However, Australian education standards are under competitive pressure from Asian economies investing heavily in education and already reaping the rewards of this investment. Professor David Gonski\(^1\) sounds the warning:

As the global economy continues on its trajectory of change, the pressure is on Australia to maintain a knowledge and skills base that can change and adapt to keep up with the world around us. The race is being run, won and lost every day. It is a continuing race and educational results tell us that Australia is losing ground from its strong position a decade ago.

It is no surprise to see Shanghai at the head of the Organisation for Economic Co-operation and Development's achievement table. There is an obvious link between its outstanding educational outcomes and its great leap forward as one of the world's most dynamic cities and a centre for financial services and manufacturing.

- Our education investments underpin our global competitiveness as a knowledge economy. Regional economies have similar aspirations and many are investing more in education and research than NSW. How can industry and government maximize returns from our education investments to maintain a competitive edge over the next decade?

2. Technology is transforming education delivery

Pervasive mobile technologies, open education, online education, peer-to-peer learning and social networking will transform education over the next decade.

The Australian Government’s Curriculum Online will help school teachers develop flexible learning approaches and integrate digital resources into the classroom. Nevertheless, the explosion of mobile technologies, social networking and online education resources suggests we may be on the cusp of radically different education delivery models.

For example, the Khan Academy (www.khanacademy.org/about), a not for profit video channel has 2,500 videos covering subjects from K – 12 maths and science to banking and venture capital. One million students a month are now viewing the videos which are being incorporated into classrooms for self-paced learning. It provides access to student and class data so teachers can diagnose where students are ‘stuck’ and where to focus for each student.

You can view Salman Khan on Ted talks: http://www.youtube.com/watch?v=qM95HHl4gLk

- Apple’s iTunes™ platform offers 500,000 courses from 1,000 universities that have been downloaded 700 million times. Stanford University and Harvard University offer free online courses. Does it matter? Are we ready to compete?
- Khan foresees a global one-world online classroom. What does this mean for NSW education delivery and how can education providers leverage the opportunities?

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\(^1\) http://www.smh.com.au/opinion/politics/we-need-to-stop-both-nation-and-needy-from-falling-behind-20120220-1tika.html#ixzz1o7hLkanZ
3. **Education is increasingly delivered in overseas markets (‘transnational education’)**

The current focus in the international education sector is attraction of international students to live and study in NSW. The business models for higher education and ELICOS providers are, to varying degrees, reliant on this income stream. Most of the $5.8 billion in education exports in 2010/11 was derived from international students living in NSW. However, the high Australian dollar, increased global competition, online education and in-market delivery of education combine to place increasing pressures on this business model.

To capture the scale of training opportunities in fast growing economies, NSW education providers will increasingly deliver in overseas markets. In India for example, 11 million students are currently pursuing a higher education but this represents only 11 per cent of their 17 to 23 year olds. Unmet demand for university places is about 4.7 million places a year and 500 million people will need vocational skills by 2022.

- Will we see more NSW education providers establish campuses overseas or partner with providers in-market to capitalise on huge training opportunities, particularly in fast-growing economies like China and India?
- NSW vocational training is world class. How can government and industry work together to capitalise on our training strengths and capture these opportunities?

4. **Research is increasingly linked to industry and global partners**

Underpinning NSW’s position as a competitive knowledge economy is an innovation ecosystem that delivers productivity gains. Research efforts must be linked to industry and global collaboration partners to maximise the return on investment in research.

International research collaborations improve research outcomes by:
- prioritising shared R&D challenges and reducing unproductive overlap of R&D
- pooling resources and accelerating R&D timeframes
- working to the complementary research strengths of collaborators
- bringing diverse cultures and markets to the innovation ecosystem.

Collaborations between industry and the research sector improve the quality, relevance and outcomes of research by:
- driving research agendas of relevance to industry and responding to industry challenges
- attracting business investment in the commercialisation of research
- piloting research with industry partners
- accelerating R&D timeframes.

- Could NSW establish an international profile for education and research around a few areas of excellence?
- Where does NSW punch above its weight in international research?
- How could we improve promotion of our strengths?
- In what areas do we underperform in research and what could we do to dramatically lift performance over the next few years?
- How can we ensure NSW areas of research excellence are responsive to industry needs, economic challenges and sectoral opportunities?
- How can we support NSW research linkages to global leaders in research and industry?
- How can we increase the government’s return on investment in research to address productivity challenges?
- How can we increase access of business, particularly SMEs, to research infrastructure and capacity?
4. INDUSTRY ISSUES

1. Increasing domestic and international competition
   There has been increased competition to the NSW international education industry from both domestic and international competitors in the international education industry. Victoria, Queensland, South Australia and Western Australia have been aggressively marketing to international students, providing integrated approaches to international student enrolment, marketing and student welfare services.

   Additionally, at a national level, Australia is competing against a renewed effort by international competitors such as the United States, the United Kingdom, Canada, Hong Kong and Singapore to grow their international student intake.

2. High Australian Dollar
   The recent downturn in international students has occurred during a period of high value in the Australian dollar, making the international industry less competitive in many markets.

3. Perception
   Over the past few years, the perception of Australian education has been affected by a range of issues including safety, security and welfare for international students, VET education quality which resulted in closures of some private VET sector, and changes in visa arrangements. Many of these issues have been considered in Federal Government reviews and are now being addressed.

   - How can industry and government work together to address the challenges of increasing competition, compounded by the high Australian dollar and perception issues?

4. Marketing and Promotion
   There have been few integrated marketing campaigns and strategies to attract international students to NSW. Marketing and promotion is undertaken by individual providers and is also fragmented among a number of government agencies.

   - Would coordinated marketing of NSW’s education strengths help to build our profile in global markets as a world class education destination?

5. Quality
   The quality of NSW education from schools to universities is critical to our competitive positioning.

   - In the context of the shifting of responsibility for the regulation of the Vocational Education and Training (VET) and university sectors to the Federal Government, what steps can NSW government and industry take to ensure a high quality, efficiently regulated education sector?

   University ranking indices are often used by international students and families to inform their decisions about where to study. The global ranking of Australia’s education institutions fluctuates; on a number of ranking indices it is falling. However, the competitive strength of Australia’s universities is their consistently high performance across campuses, with a greater percentage of universities in the top 500 than our competitors.

   - Where is the next wave of competition in university rankings emerging? Will Asian universities outperform Australian universities? What is our competitive advantage in these markets?
How can we position our most competitive universities to maintain or improve their rankings?
How can we lift overall performance of NSW universities to maintain or improve the sector’s performance as a whole?

6. **Visa Changes**
From 2009 the Australian Government has introduced a number of changes to student visa arrangements designed to attract genuine international students. These include:
- changes to the Student Visa Assessment Level Framework;
- introducing the Skills Occupation List;
- stronger student visa integrity checks; and increasing the annual living expense amounts required for international students to undertake education in Australia/NSW.

How can we improve the visa framework to attract more high quality students in NSW? Are we on the right track?
Longer term, how can we link international students to our skills and industry needs?

7. **Workforce supply and skills development**
There is a declining trend in the number of domestic higher degrees attained by research enrolments, resulting in an expected shortfall in the supply of research qualified people and employees.

What are the implications for skills and workforce development of this shortfall?
How should our international student attraction efforts respond to this trend?
What is already being done to address this issue and what more can industry and government do to reverse the trend?

8. **Student Welfare**
Affordable housing and accommodation, coordinated student support and access to part-time work are among student welfare issues that influence NSW’s attractiveness as an education destination.

Many education providers have developed services to meet international student welfare needs. What are the gaps in provision of student welfare?
Is the market consistently addressing these issues?
Is there a role for government and are mandated standards required?
Is there value in a coordinated state-wide approach to aspects of student welfare?
International student enrolments – 2010 NSW education sector breakdown
Source: Australian Education International

Higher Education
The higher education sector is predominately dominated by the public sector, with eleven public universities within NSW. Public higher education providers account for over 83 per cent of higher education international student enrolments within NSW in 2010.

- **National Market Share:** NSW market share for international student enrolments in the higher education sector 2010 was 34.8 per cent, a slight increase of 0.1 per cent from 2009, but down from the over 36 per cent market share per year between 2005-2007.

- **Student Enrolments:** In 2010, the number of international student enrolments to NSW higher education institutions was 84,408 an increase of 5,983 enrolments from 2009.

- **NSW University Rankings:** NSW universities have remained relatively stable in rankings in two key ranking indices, though overall have displayed a negative trend trajectory.
• **Australian University Rankings:** Generally, a negative trend trajectory can be displayed for the majority of Australian universities, with the exception of the University of Melbourne and the University of Queensland.

• **International University Rankings:** The United States dominates the top 10 universities in the two ranking indices. The top 100 are dominated by United States, United Kingdom, European and Canadian education institutions.

• **International Universities in NSW:** A number of international universities have established or are in the process of establishing campuses in NSW, including Boston University and New York University.

• **Country of Origin:** Chinese students continue to be the largest single group of international student enrolments in NSW higher education institutions in 2010.

**Vocational Education and Training**
The VET sector is dominated by private sector providers with a market share of 92.8 per cent in NSW. The VET sector has also been the fastest growing sector in the international education industry.

• **Market Share:** NSW market share for international student enrolments in the VET sector in 2010 was 39.9 per cent, a decrease of 1.5 per cent from 2009. This continues a loss of VET market share to other States since 2005, with NSW VET market share then 55 per cent. Since 2005 Victoria’s share has increased from 24.7 per cent to 33.7 per cent in 2010 and Queensland from 10 per cent to 14.5 per cent in 2010.

• **National Market Share:** International student enrolment in VET education has had significant growth in market share of international education sectors nationally with 14.8 per cent market share in 2005 to 33.3 per cent market share in 2010.

• **Student Enrolments:** In 2010, the number of international student enrolments to NSW VET institutions was 81,978, a decrease of 4,242 students from 2009. A decrease was registered also in Victoria and Tasmania for 2010, the only other states to do so.

• **Country of Origin:** Indian students continue to be the largest single group of international student enrolments in NSW VET institutions in 2010, despite a fall in the number of Indian students to NSW. Victoria is the single largest market for Indian students (both generally and in the VET sector) with over 35,448 enrolments in 2010 compared to NSW’s 15,028 in the VET sector.

**English Language Intensive Courses for Overseas Students (ELICOS)**
ELICOS courses provide English language education to international students who want to study in Australia or wish to improve their English.

ELICOS providers are dominated by the private sector, with over 73.1 per cent of international students enrolled in private provider ELICOS courses nationally in 2010. This percentage is even higher in NSW, with 84.3 per cent of international student enrolments in private ELICOS courses in 2010.

• **Market Share:** NSW market share for international student enrolments in the English Language Intensive Courses for Overseas Students (ELICOS) sector in 2010 was 40.4 per cent, a 1.3 per cent increase over 2009, but still a decrease over the highs experienced between 2006 and 2008 (41-42 per cent). Despite the decreases, NSW has remained relatively stable, as has the rest of the nation with Victoria and Queensland having 22.7 per cent and 21.3 per cent of the ELICOS market in 2010.

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2 Australian Education International – Pivot Table Data
- **National Market Share**: International student enrolment in ELICOS education has seen growth against other international student enrolment sectors nationally between 2005 and 2009, but has reduced from 21.9 per cent in 2009 to 18.4 per cent in 2010.

- **Student Enrolments**: In 2010, the number of international student enrolments to NSW ELICOS institutions was 45,950, a decrease of 8,009 students from 2009. A decrease in every state and territory apart from the Northern Territory and the Australian Capital Territory was registered in 2010.

- **Country of Origin**: Top 10 ELICOS international student source countries for NSW include China, South Korea, Japan, Brazil, Thailand, France, Saudi Arabia, Vietnam, Switzerland and Germany.

**Schools**

- **Market Share**: NSW market share for international student enrolments in the school sector in 2010 was 28.7 per cent, a 2.4 per cent decrease over 2009, but still a decrease over the highs experienced between 2005 and 2009 (31-33 per cent).

- **National Market Share**: International student enrolment market share in the school sector has seen a significant decrease since 2005 nationally, with schools accounting for over 7.3 per cent in 2005 compared with 3.9 per cent in 2010.

- **Student Enrolments**: In 2010, the number of international student enrolments to NSW school institutions was 6,935, a decrease of 1,587 students from 2009. A decrease in every state and territory apart from the Northern Territory was registered in 2010.

- **Country of Origin**: Key international student markets include China and South Korea.

**Research**

NSW has the largest research sector in Australia. NSW demonstrates excellence in a number of education and research disciplines, including the physical sciences, mathematics, engineering, business, economics and social sciences.

- **Research sector**: NSW has the largest research sector Australia, with one of its University’s ranked in the top 100 in the world, with six NSW universities in the top 500 of the Academic World Ranking of Universities index.

- **University research income**: In 2010, NSW universities received a total of $878,945,694

- **Specialised research centres**: More than 60 Australian Research Council Centres of Excellence (ARCCOE) and Collaborative Research Centres (CRCs) have a presence in NSW, including the headquarters of 12 ARCCOEs and 11 CRCs in NSW. Partnering with industry, Government and international experts, these centres span information communication technology, medical and health research, agriculture, environmental sustainability, advanced technologies and manufacturing.

- **Research strength**: Areas of research strength include: quantum computing, energy research (including photovoltaics and coal), autonomous systems (including robotics), nanotechnology and metrology, organic electronics, information technology and biological sciences.

- **Australian Research Council**: NSW is the largest recipient of Australian Research Council (ARC) funding, with NSW receiving over 37 per cent of ARC funding in 2011 as compared to 32.5 per cent in 2010.

- **National Health and Medical Research Council**: NSW received over $202 million in National Health and Medical Research Council (NHMRC) funding in 2011, which is an
increase over 2010. However, NSW continues to receive less than its per capita share of NHMRC funding.

- **Business Expenditure on Research and Development:** NSW accounts for over $6.2 billion in BERD in 2009/10 or 37 per cent of the national total, growing over $830 million from 2008/09.