



Review of Australian Curriculum

Submission

February 2014

About the Australian Industry Group

The Australian Industry Group (Ai Group) is a peak industry association in Australia which along with its affiliates represents the interests of more than 60,000 businesses in an expanding range of sectors including: manufacturing; engineering; construction; automotive; food; transport; information technology; telecommunications; call centres; labour hire; printing; defence; mining equipment and supplies; airlines; and other industries. The businesses which we represent employ more than 1 million employees. Ai Group members operate small, medium and large businesses across a range of industries. Ai Group is closely affiliated with more than 50 other employer groups in Australia alone and directly manages a number of those organisations.

Recommendations

1. That the Review of the Australian Curriculum reconsider the literacy and numeracy requirements with a view to clarifying and strengthening standards to enable students leaving school to be able to make more effective contributions to the workforce.
2. That the Review of the Australian Curriculum considers strategies to facilitate increased student engagement and attainment in Science, Technology, Engineering and Mathematics (STEM) related disciplines.
3. That the Review of the Australian Curriculum maintains the important cross-curriculum focus on the importance of Asia and Australia's engagement with Asia where appropriate.

Introduction

The Australian Industry Group welcomes the opportunity to comment on the Review of Australian Curriculum. Rather than specifically address the terms of reference, this response focuses on national curriculum issues of particular concern to the Ai Group. These concerns are:

- The low levels of literacy of many school graduates
- The low levels of numeracy of many school graduates
- The decline in participation of STEM related subjects by secondary students
- The importance of Asia and Australia's engagement with Asia as a cross-curriculum theme.

School Sector Literacy

The Ai Group has been concerned for some time about the state of literacy in Australian schools.

There has been recent activity in the school sector and the skill levels of school leavers are of particular interest to industry as young people enter the workforce. This activity has been centred on the introduction of the National Curriculum via the Australian Curriculum, Assessment and Reporting Authority (ACARA) and the National Assessment Program – Literacy and Numeracy (NAPLAN). Despite increased expenditure on school education and increases in the achievement of senior secondary certificates, there has been no improvement in average literacy levels across age groups.

The *2008 Melbourne Declaration* articulated the central educational goals government and schools need to attain, and specified literacy and numeracy as essential foundations for learning. Yet Australia does not feature favourably in relevant international comparisons of data, showing deteriorating reading literacy of 15 year olds over the past decade in the OECD Programme for

International Student Assessment (PISA).¹ The Australian Council for Educational Research (ACER), which administers the Australian component of PISA on behalf of the OECD, commented on the results:

“Australia was the only high performing country to show a significant decline in reading literacy performance between PISA 2000 and PISA 2009,” Professor Masters said. Of greatest concern, students from the highest socioeconomic group outperformed students from the lowest socioeconomic group in reading by the equivalent of almost three full years of schooling. “These achievement gaps place an unacceptable proportion of 15-year-old students at serious risk of not achieving literacy levels sufficient for them to effectively participate in the workforce,” Professor Masters said. “Some Australian teenagers may be trying to enter the workforce and forge a future for themselves with reading, mathematics and science literacy skills equivalent to a Year 7 or 8 education or worse.”²

The ACER noted that an unacceptable proportion of 15 year olds are at serious risk of not achieving literacy levels sufficient for them to effectively participate in the workforce.

The next series of PISA results were released in December 2013.³ This report revealed that the reading skills of 15 year olds have slipped backwards over the past decade with Australia performing at equal 10th. In Australia 36% of students failed to reach the national baseline proficiency level in reading literacy compared to 14% in Shanghai-China, 21% in Hong Kong-China and 24% in Korea.⁴ Six countries, including Australia, showed a significant decline in reading literacy performance between PISA 2000 and PISA 2012.

The 2011 Progress in International Reading Literacy Study (PIRLS) results were released in December 2012.⁵ The ACER reported that Australia was significantly outperformed by 21 countries in the first ever international assessment of Year 4 reading. The study revealed that many Australian Year 4 students have substantial literacy problems with about one quarter of the assessed students not reaching the internationally accepted minimum standard of proficiency. ACER Chief Executive, Professor Geoff Masters said: “To say the results are disappointing is an understatement.”⁶ It is heartening to note that one of the reviewers has publicly “warned of the need for urgent repairs to reverse the nation’s slump in global education rankings.”⁷

Behind these poor international results is the absence of clear and measurable literacy standards within the English curriculum. ACARA has divided English into Foundation to Year 10 and Senior Secondary Curriculum. For the Foundation to Year 10 curriculum, literacy is named as one of three strands. However, when viewing the achievement standard it is difficult to determine what standard a student’s performance is measured against.

¹ Media Release, 7 December 2010, *PISA identifies challenges for Australian education*.

² MEDIA RELEASE, 7th December 2010, *PISA identifies challenges for Australian education*.

³ MEDIA RELEASE, 3rd December 2013, *Latest PISA results ‘cause for concern’, says ACER*.

⁴ ACER FACT SHEET, *Selected results from PISA 2012*, 3 December 2013.

⁵ Sue Thomson et al., *Highlights from TIMSS and PIRLS 2011 from Australia’s perspective*, ACER.

⁶ MEDIA RELEASE, 13th December 2012, *ACER releases results from latest international studies of student achievement*.

⁷ *We have to learn from the best: Donnelly*, Weekend Australian, 11 January 2014.

Figure 1: English Year 10 Achievement Standard

Year 10 Achievement Standard

Receptive modes (listening, reading and viewing)

By the end of Year 10, students evaluate how text structures can be used in innovative ways by different authors. They explain how the choice of language features, images and vocabulary contributes to the development of individual style.

They develop and justify their own interpretations of texts. They evaluate other interpretations, analysing the evidence used to support them. They listen for ways features within texts can be manipulated to achieve particular effects.

Productive modes (speaking, writing and creating)

Students show how the selection of language features can achieve precision and stylistic effect. They explain different viewpoints, attitudes and perspectives through the development of cohesive and logical arguments. They develop their own style by experimenting with language features, stylistic devices, text structures and images.

Students create a wide range of texts to articulate complex ideas. They make presentations and contribute actively to class and group discussions, building on others' ideas, solving problems, justifying opinions and developing and expanding arguments. They demonstrate understanding of grammar, vary vocabulary choices for impact, and accurately use spelling and punctuation when creating and editing texts.

The senior secondary curriculum consists of four subjects: English, English as an Additional Language or Dialect, Essential English and Literature. In the senior secondary curriculum there are no references to literacy strands. Rather, literacy is considered to be a general capability taught across the curriculum as well as within the various English subjects. This curriculum specifies 'content and achievement standards' and the latter refer to 'descriptions of the quality of learning (the depth of understanding, extent of knowledge and sophistication of skill) expected of students.'⁸ Achievement standards are organised into two dimensions, specifically

- Dimension 1: responding to oral, written or multimodal texts
- Dimension 2: creating oral, written and multimodal texts⁹

The achievement standards provide an indication of typical performance at five different levels (grades A to E) following the completion of study. It is difficult from this approach to establish a clear sense of literacy standards.

The subject Essential English specifically refers to a workforce focus. The focus is to enable students "to become competent, confident and engaged users of English in many contemporary contexts including everyday, community, social, further education, training and workplace contexts."¹⁰ It is not clear why this would not be the focus of all English subjects.

In addition, it is the responsibility of state and territory authorities to determine how they will integrate the Australian Curriculum content and achievement standards into their courses. This adds the potential of national inconsistency to the obscurity of literacy standards.

⁸ www.australiancurriculum.edu.au/SeniorSecondary/english/english/overview

⁹ www.australiancurriculum.edu.au/SeniorSecondary/english/english/structure

¹⁰ www.australiancurriculum.edu.au/SeniorSecondary/english/essential-english/Rationale

The statement on literacy as a general capability refers to many things including ‘dispositions’, ‘confidence’ and ‘behaviours’, but is silent in regard to standards.¹¹

This raises the question about whether it is appropriate to have exit standards in this area. A Victorian study funded by the Joint Policy Unit of the Victorian Department of Education and Early Childhood Development and the Victorian Department of Innovation, Industry and Regional Development contained within its conclusions:

“The research evidence does not provide strong support for the notion that compulsory exit-level literacy and numeracy standards have a substantial impact on student achievement. However, there are other benefits associated with such standards that mean their implementation in Victoria should not be dismissed. These benefits include the development of a shared language across sectors and providers for discussing student achievement levels, a clearer articulation for schools and the community of the types of skills students need for full participation in society, the provision of more detailed information for employers and further education about students’ literacy and numeracy skills, and raised community confidence in the education system.”¹²

One jurisdiction, South Australia, does include the following policy in the search for standards:

“The Board has endorsed the Australian Core Skills Framework level 3 descriptions in reading, writing, and numeracy as reference points for the SACE literacy and numeracy benchmarks.”¹³

There were no national exit standards for literacy associated with the award of senior secondary certificates until an announcement from the Western Australia Premier in early 2013.¹⁴ From 2014 Western Australia will introduce a minimum literacy (and numeracy) assessment at Year 10 which will act as a standard. This will be extended to Years 11 and 12 in subsequent years. The ACT Board of Senior Secondary Studies recently announced a review of their Year 12 requirements. It was noted that currently “there are no particular courses or minimum levels of achievement required.”¹⁵

As indicated, only South Australia links the achievement of its senior secondary certificate to level three of the Australian Core Skills Framework.¹⁶ Even though this framework is technically for adults it does have the advantage of providing a national standard of literacy measurement. Given that it is a national measure, and also the one that will be used to assess progress in the National Foundation Skills Strategy for Adults, it is timely for school systems to consider its application to their sector.

Ai Group is concerned that school students exit school without meeting a set national standard in literacy and inhibit their capacity to effectively contribute to the workforce.

¹¹ *General Capabilities in the Australian Curriculum – January 2013*, Australian Curriculum website.

¹² *Strengthening Literacy and Numeracy Achievement in Senior Secondary Years: the Potential Role of Literacy and Numeracy Exit Standards*, Assessment Research Centre, University of Melbourne, 2010, page 73.

¹³ SACE Board of South Australia, SACE Policy Framework, page 7.

¹⁴ Ministerial Media Release, *Major reforms to raise bar on literacy and numeracy*, 21 January 2013, Government of Western Australia.

¹⁵ *Year 12 measure under review*, Canberra Times, 21 December 2013.

¹⁶ *Policy Circular, Literacy and Numeracy*, SACE Board of SA, February 2010.

School Sector Mathematics

There are similar concerns in regard to school student performance in mathematics. The 2011 Trends in Mathematics and Science Study (TIMSS) indicates that Australia's performance in mathematics and science has stagnated over the past 16 years.¹⁷ Within this international research 17 countries recorded significantly higher results than Australia in mathematics for Year 4 students including most of the Asian countries, England and the United States. Of particular concern is the result that 30% of Australian Year 4 students were achieving at the low international benchmark or not achieving at least this level.¹⁸ It is critical to ensure that the primary school curriculum for numeracy is engaging and enables students to master basic skills. Failure to ensure that students moving from primary to secondary education have met the minimum standards will lead to continuing disengagement. The curriculum must allow for the mastery of skills and tasks to enable progression. Experience reveals that fundamental skills missed in the early learning of numeracy will lead to continuing issues and act as a barrier to the further development of numeracy skills.

The latest PISA results also present a bleak picture. The mathematics skills of 15 year olds have slipped back as was the case for reading. The results indicate that 16 countries achieved significantly higher results than Australia. Australia's mean mathematical literacy performance declined significantly between PISA 2003 and PISA 2012 by the equivalent of more than a half year of schooling.¹⁹ The results indicate that 42% of the students failed to reach the national baseline proficiency level in mathematical literacy.²⁰

What then is the situation regarding the state of mathematics standards in the new Australian Curriculum? The description of the achievement standards for mathematics is similar to that for English. Specifically,

"Across Foundation to Year 10, achievement standards indicate the quality of learning that students should typically demonstrate by a particular point in their schooling. Achievement standards comprise a written description and student work samples."²¹

This seems to suggest that the achievement of standards is linked to the stage of schooling. This may be more arbitrary than objective. It enables students who are poor at mathematics to continue year after year without achievement and more able students are restrained. The curriculum needs to reflect the core numeracy standards as well as providing for remedial and extension work. Teaching technique is central to these considerations.

¹⁷ Sue Thompson et al., *Highlights from TIMSS and PIRLS 2011 from Australia's perspective*, Australian Council for Educational Research, 2012.

¹⁸ Sue Thompson et al., *Highlights from TIMSS and PIRLS 2011 from Australia's perspective*, Australian Council for Educational Research, 2012.

¹⁹ MEDIA RELEASE, 3rd December 2013, *Latest PISA results 'cause for concern', says ACER*.

²⁰ ACER FACT SHEET, *Selected results from PISA 2012*, 3 December 2013

²¹ www.australiancurriculum.edu.au/mathematics/achievement-standards

Senior secondary mathematics consists of four subjects: Essential Mathematics, General Mathematics, Mathematical Methods and Specialist Mathematics. The logic of this construct is: “each focusing on a pathway that will meet the learning needs of a particular group of senior secondary students.”²² Essential Mathematics is the only subject that specifically mentions employment:

“it provides students with the mathematical knowledge, skills and understandings to solve problems in real contexts for a range of workplace, personal, further learning and communal settings. This subject provides the opportunity for students to prepare for post-school options of employment and further training.”²³

It is not immediately apparent why all branches of mathematics should not have this focus.

In terms of standards, mathematics like English is also the province of the state and territory accreditation authorities. They determine how to integrate the achievement standards into their jurisdiction-based constructs and so national consistency again is an issue. Despite the numeracy requirements established in several senior secondary school certificates no jurisdictions have compulsory mathematics requirements that involve all year 12 students.²⁴

There is also a statement about Numeracy as a General Capability. As for English there is no reference to standards. Ai Group is concerned that school students exit school without meeting a set benchmark in numeracy. The curriculum should be framed to enable the mastery of numeracy skills to a set standard before advancement to the next level regardless of the year of schooling. As indicated earlier, until January 2013 there were no national exit standards for literacy and associated with the award of senior secondary certificates.²⁵ Only South Australia links the achievement of its senior secondary certificate to level three descriptors of the Australian Core Skills Framework.²⁶

In addition to the specific nature of the Australian Curriculum in mathematics, the Ai Group has other allied concerns. A decreasing number of students are participating in mathematics. This can be a feature of education systems like Australia where mathematics is not compulsory until the end of school where it is in China, Russia and some European countries.²⁷ The state of mathematics and science in schools has deteriorated to a ‘dangerous level’ according to a review commissioned by the Vice-Chancellor’s of Australia’s eight research-intensive universities. The number of students undertaking advanced mathematics in secondary school fell by 27% between 1995 and 2007. Students may select the easier option of General Mathematics in the belief that this will contribute to a higher ATAR for university entrance. In response to this the ACOLA report makes a series of recommendations about mathematics advocating consideration of some element of compulsion.²⁸

²² www.australiancurriculum.edu.au/SeniorSecondary/mathematics

²³ Ibid

²⁴ *STEM: Country Comparisons*, Final Report, Australian Council of Learned Academies, May 2013, page 83.

²⁵ Media Release, 22 January 2013, The Hon Peter Garrett, *Extra funding for literacy and numeracy in WA schools*.

²⁶ *Policy Circular, Literacy and Numeracy*, SACE Board of SA, February 2010.

²⁷ *STEM: Country Comparisons*, Final Report, Australian Council of Learned Academies, May 2013, page 14.

²⁸ Ibid, page 20.

The impact of this decline is compounded by the lack of qualified teachers.²⁹ This was also reported in the TIMSS study where more than 20% of Year 8 students were being taught mathematics by teachers who were only ‘somewhat’ confident about teaching the subject.³⁰ A 2011 study by the Australian Council for Education Research found that for years 7 – 10 mathematics teaching only 62% of teachers had two or more years of tertiary mathematics (the minimum requirement). More than a third were teaching out of field and 23% had no tertiary mathematics at all.³¹ This is related to the low ATAR scores required for entry into teaching.

Employer Perceptions

Ai Group employer surveys reflect concern about both the literacy and numeracy levels of students leaving school for the workforce. Some students who are highly numerate have literacy issues which prevent them from effectively solving written problems requiring interpretation in mathematics.

Employers are very interested in the quality of school leavers that apply for employment. There is particular interest about the skills that such new entrants to the workforce have. Employer views about the schooling system are derived from our *Survey of Workforce Development Needs 2012*. The survey addressed the issue of the level of satisfaction of employers with the core skills of school leavers applying for jobs.

Chart 1: Levels of Employer Dissatisfaction with Core Skills of School Leavers



²⁹ <http://www.theaustralian.com.au/news/nation/mathematics-students-in-serious-decline>, March 10, 2010.

³⁰ MEDIA RELEASE, 13th December 2012, *ACER releases results from latest international studies of student achievement*.

³¹ As reported in *STEM: Country Comparisons*, Final Report, Australian Council of Learned Academies, May 2013, page 17.

Chart 1 represents the combined “dissatisfied” and “very dissatisfied” responses from employers. There is significant concern about literacy and numeracy with over 29% dissatisfied with basic literacy and the use of English and 30% dissatisfied with numeracy.

These concerns extend to other core skills highly regarded in the workplace. Dissatisfaction was high for skill levels in self-management (38%), planning and organising (38%), problem-solving (34%) and initiative and enterprise (33%).

In addition, over 32% of employers were dissatisfied with school leavers’ knowledge about their chosen career or job. This does not reflect well on the provision of career education in the schooling sector. Ample information is available about university programs but students pursuing a vocational or occupational pathway need access to equally relevant, comprehensive and clear information about post-school VET and employment opportunities in their local area.³²

These foundation skills and core skills are very important for workplaces. There is clearly a concern about the adequacy of literacy and numeracy skills of school leavers. This mirrors the concerns employers have about these skills within the existing workforce. These poor results reinforce the fact that many young school leavers enter the workforce without adequate preparation in essential foundation skills.

Science, Technology, Engineering and Mathematics (STEM)

The importance of STEM disciplines for the future economic and social well-being of Australia cannot be underestimated. International research indicates that 75% of the fastest growing occupations require STEM skills and knowledge.³³ Employment in STEM occupations is projected to grow at almost twice the pace of other occupations.³⁴ These skills are critical for Australia’s national productivity and global competitiveness. The combination of Science, Technology, Engineering and Mathematics as STEM is a central preoccupation of policy makers that is growing across all sectors of education and gaining international credence.³⁵

The Australian Workforce and Productivity Agency has noted that despite attempts by governments over the last decade to increase school student participation in STEM the proportion of students commencing in STEM has flat-lined at around 10% or less.³⁶

In addition, research is indicating that girls are opting out of mathematics and science. In NSW for example, the percentage of girls not studying any maths in the HSC increased from 9.5% in 2001 to

³² Kira Clarke, *Entry to vocations: the efficacy of VET in Schools*, National Vocational Education and Training Research program, NCVET, 2012.

³³ Becker, K. and Park, K.; Effects of integrative approaches among STEM subjects on students’ learning, *Journal of STEM Education* 12, July – September 2011.

³⁴ Elizabeth Craig et al., *No Shortage of Talent: How the global market is producing the STEM Skills needed for growth*, September 2011, Accenture Institute for High Performance.

³⁵ Dr Mike Brown, *Analysing some STEM-like programs in secondary schools across Australia*, La Trobe University.

³⁶ *Australia’s skills and workforce development needs*, Discussion Paper, Australian Workforce and Productivity Agency, July 2012.

21.8% in 2011. Only 13.8% of girls studied one maths and one science subject for their HSC in 2011.³⁷ The gender disparity in maths and science participation is now greater than it was in the 1980s.

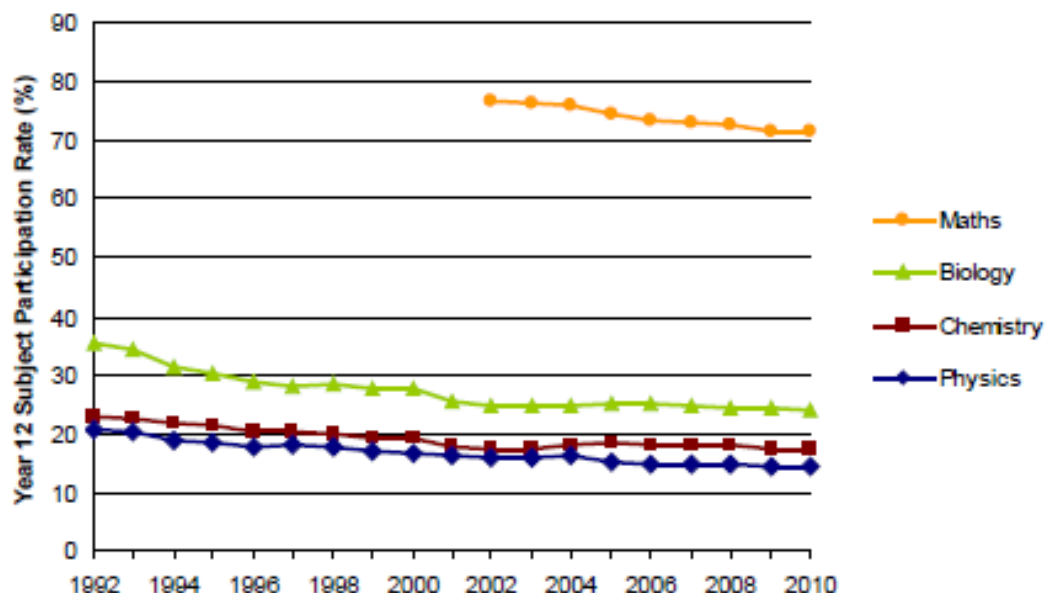
A report from Universities Australia highlighted a number of concerns in relation to secondary education including:

- “in too many schools STEM is still mostly science and mathematics taught separately with little or no attention to technology and engineering”
- “Students need to be made aware of the career opportunities afforded to STEM graduates at an earlier age rather than just years 11 and 12³⁸”

“The state of maths and science at Australian schools and universities has deteriorated to a dangerous level.”³⁹ (Vice-Chancellor Gavin Brown, University of Sydney)

Ai Group has drawn attention to the unacceptably low level of participation by secondary school students in STEM related areas of knowledge and skills.⁴⁰ The Office of the Chief Scientist has documented the decline in the proportion of Year 12 students undertaking mathematics and science since 1992.

Chart 2: Year 12 Mathematics and Science Participation 1992 - 2010⁴¹



³⁷ Study finds more girls opting out of maths and science, The Conversation, 14 February 2013.

³⁸ Universities Australia, STEM and non-STEM First Year Students, January 2012.

³⁹ <http://www.theaustralian.com.au/news/nation/mathematics-students-in-serious-decline>, March 10, 2010.

⁴⁰ Lifting our Science, Technology, Engineering and Maths (STEM) Skills, Australian Industry Group, 2013.

⁴¹ Mathematics, Engineering and Science in the National Interest, Office of the Chief Scientist, May 2012, page 19.

This indicates that the proportion of Year 12 students participating in mathematics fell from 77% to 72%, biology from 35% to 24% and physics from 21% to 14%. Within the mathematics subjects only 10% participated in advanced rather than elementary mathematics.

Ai Group is concerned that declining interest in STEM courses in senior secondary certificates poses an immense challenge to current skills shortages in engineering professions, technicians and para-professional occupations and to securing Australia's future manufacturing skills base, as these subjects often serve as prerequisites to most trades and university science and engineering courses. The ACOLA report recommends the reintroduction of more comprehensive prerequisite requirements for university entrance to encourage greater secondary school student participation in STEM subjects.⁴² Further,

“despite the plethora of government policies and reviews focused on education, and science and innovation and the relatively recent emergence of the STEM agenda in Australia, the ‘pipeline’ is decreasing and there are serious questions about performance in the foundation skills of literacy and numeracy, and the enabling sciences, mathematics and scientific literacy.”⁴³

In terms of the Australian Curriculum it is important that STEM studies are designed to be attractive and relevant to students. The curriculum frameworks need to emphasise methods of problem solving, inquiry, critical thinking and creativity. In terms of curriculum delivery it is important for schools to teach STEM related disciplines in an integrated and engaging manner including an increased awareness of STEM-related occupations.

The Development of Australia's Asia Capabilities

All Education Ministers agreed in the Melbourne Declaration on Education Goals for Young Australians on the need for Australia to become Asia literate.⁴⁴ This has been defined as:

“The idea of Asia literacy is that by the time they leave school, a strong cohort of young Australians will speak an Asian language and all young Australians will have foundational and deep knowledge, skills and understanding of the histories, geographies, arts and literature of the diverse countries of Asia.”⁴⁵

The new Australian Curriculum addresses this through the introduction of a cross-curriculum priority called 'Asia and Australia's engagement with Asia'.⁴⁶ This change is an acknowledgement of a number of key factors:

- Australia is located in the Asia region and Asia's influence on our economy and broader social, cultural and political endeavours is increasing rapidly;
- Asia-related knowledge and skills provide young Australians with a competitive edge in today's world and contribute to our national advantage; and

⁴² *STEM: Country Comparisons*, Final Report, Australian Council of Learned Academies, May 2013, page 20.

⁴³ *Ibid*, page 51.

⁴⁴ As cited in *Achieving the Goals of the Melbourne Declaration*, Asialink.

⁴⁵ www.asiaeducation.edu.au/asia_literacy_the_facts.html

⁴⁶ www.acara.edu.au/curriculum/cross_curriculum_priorities.html

- schools have a key role to play in fostering social inclusion and cohesion as well as respect for the cultural diversity existing within their own communities and beyond.⁴⁷

The Ai Group has supported the increased awareness of the importance of Asia, particularly as it relates to Australian business.⁴⁸ This has been expressed in terms of developing an Asia capable workforce and a key strategy to achieving this is to more effectively educate Australia's future workforce for the Asian century. Specifically, "universities, TAFEs and schools must incorporate Asia-relevant content across disciplines and curricula."⁴⁹ Similar aims were expressed in the *Australia in the Asian Century White Paper*.⁵⁰ The introduction of this cross-curriculum priority into the Australian Curriculum is a significant movement towards the achievement of this national strategy.

The Asia and Australia's engagement with Asia priority provides the opportunity for students to celebrate the social, cultural, political and economic links that connect Australia with Asia. This cross-curriculum priority is not a subject or learning area. It is incorporated, where relevant, in subject content and clearly some subjects provide more scope than others for its incorporation. It can be taught through all subject areas (e.g. English, History, Geography, Arts, Science, Mathematics) as individual schools determine appropriate.

The inclusion of this focus is timely given that only a small proportion of the curriculum explicitly mentions content related to the Asia region. This is an important change as the majority of Australian schools offer little, if any, coherent learning opportunities for Asia-related content. Across Australia there is generally

"a strong disposition for the inclusion of content on Europe rather than Asia... Where there is content on Asia, it is mostly an Australian or Western focus such as the Vietnam War; or, in English, the focus on Asia might only include older established texts such as Graham Greene's The Quiet American".⁵¹

This cross-curriculum priority provides an essential policy requirement to ensure more schools teach about Asia. Past experience indicates that without this policy, Australian schools will not increase an Asia focus in curriculum content. Given Asia's global rise and the importance of Australia's relationships with the region, a 'business as usual' approach does not meet the needs of young Australians in this regard. Policy status is required, combined with investment in building the Asia capabilities of Australia's education workforce through initial teacher education, ongoing professional learning, engagement of school leaders and provision of Asia focused curriculum resources.

It is also important to address the issue of Asian languages. Fewer than 6% of Australia's secondary

⁴⁷ http://www.acara.edu.au/curriculum/cross_curriculum_priorities.html

⁴⁸ *Engaging Asia: getting it right for Australian business*, March 2011, Australian Industry Group and Asialink.

⁴⁹ *Developing an Asia Capable Workforce: a national strategy*, Asialink, September 2012.

⁵⁰ *Australia in the Asian Century, White Paper*, October 2012, Australian Government.

⁵¹ Wilkinson, J. and Milgate, G, AEF, 2009, *Studies of Asia in Year 12*.

school students participate in Asian language study.⁵² Languages are part of Phase Two subject development in the Australian Curriculum and thirteen languages are currently under development by ACARA. Asian languages include Chinese, Japanese, Indonesian, Korean and Vietnamese. The curricula for Languages are yet to be finalised and are not currently being implemented in schools.

In a related initiative, intercultural understanding is one of seven general capabilities to be developed by all students by the time they leave school. The Australian Curriculum includes seven general capabilities: Literacy, Numeracy, Information and Communication Technology Capability, Critical and Creative Thinking, Personal and Social Capability, Ethical Understanding and Intercultural Understanding. Intercultural understanding 'involves students in learning about and engaging with diverse cultures in ways that recognise commonalities and differences, create connections with others and cultivate mutual respect'.⁵³ This can be viewed as a complementary to the cross-curriculum priority that addresses Asia.

This curriculum policy approach also links with other key government initiatives. Asia-engaged students who proceed to university will contribute to the demand for the New Colombo Plan designed to strengthen personal and institutional relationships with Asia via study and internships undertaken by Australian undergraduate students in the region. Similarly, students leaving school with foundational and deep knowledge and understandings of Asia contribute to the government's investment, in partnership with the business sector, in the National Strategy to Develop an Asia Capable Workforce.⁵⁴

Conclusion

The review of the Australian Curriculum provides a new opportunity to revisit the all-important areas of literacy and numeracy standards. There has been much concern in the community including business about low levels of these essential skills. Statements about literacy and numeracy standards in the Australian Curriculum require at least, greater clarity, and at best, greater rigour.

When reviewing subjects that contribute to STEM, every endeavour should be made to make these engaging to encourage student participation. To the extent that it is able ACARA should provide advice to schools and teachers about the value of STEM-related disciplines and how they can be taught in engaging and integrated ways.

Finally, it has taken some time to achieve some sort of national consensus about the importance of Asia and Australia's relationship with the breadth of Asian countries. This includes all levels of education including schools. Now is not the time to retreat from this increasing national commitment and indeed, more needs to be done to encourage the awareness of the importance of Asia to our young people.

⁵² *Mute nation faces the Asian century*, The Age, 6 August 2012.

⁵³ <http://www.australiancurriculum.edu.au/GeneralCapabilities/Intercultural-understanding/Introduction/Introduction>

⁵⁴ *Developing an Asia Capable Workforce: A National Strategy*, Asialink, The University of Melbourne, 2012