



Education Council Review of Senior Secondary Pathways: DASSH Response

The Australasian Council of Deans of Arts, Social Sciences and Humanities (DASSH) is the authoritative agency on research, teaching and learning for the Humanities, Arts and Social Sciences (HASS) in Australian and New Zealand universities. We welcome the opportunity to comment on the Education Council's Review of Senior Secondary Pathways from the perspectives of our members, their faculties, and their current and future students.

Recent data from our Australian members indicates that there has been a decline in enrolments in undergraduate HASS degrees in recent years.¹ This trend, should it continue, is concerning given that predictions for Australia's future economy and workforce emphasise the necessity of skills best developed through engagement with HASS disciplines, such as communication, creativity, cultural awareness and critical thinking.

Today's senior secondary students require expertise across both HASS and STEM disciplines in order to be successful throughout their working lives, yet in recent years there has been a disproportionate emphasis by governments and some industry sectors on the role of STEM disciplines in the context of future work. While some focus on STEM is important to an extent, particularly with regard to the promotion of women in traditionally male-dominated fields, it is vital to promote the value of pairing HASS and STEM skills in the future workforce.

It is becoming increasingly evident that a single post-secondary qualification is unlikely to provide sufficient training for the entire career of a student graduating secondary school in 2019. Most will complete multiple degrees or certificates at different levels, often in diverse fields, and many will decide to retrain or upskill at various stages of their careers. DASSH members believe current secondary students need to be made aware of the need for continuing, lifelong education, both to manage their expectations of post-secondary courses and to relieve the anxiety that many students experience during the final years of secondary school. Encouraging the view that education is an ongoing journey with a variety of pathways and entry-points will allow students greater freedom to pursue different fields without fearing that their options have been irreparably limited.

In the current submission, we present a report published by DASSH in November 2018, "**Humanities, Arts and Social Sciences (HASS) Degrees: Powering Workforce Transformation Through Creativity, Critical Thinking and Human Interaction.**"

This report provides evidence that senior secondary students, regardless of their desired career pathways, require the skills and aptitudes that are developed through engagement with HASS disciplines to be successful in their careers. Though not all students will be best served by a university-level HASS qualification, most will benefit from some degree of formal instruction in HASS disciplines during post-secondary training. To ensure all students are given the option to include studies of HASS in their post-secondary training, governments, research institutions, universities and higher education providers must increase support for HASS teaching and research. Ensuring a diverse and globally competitive HASS workforce in Australian universities will be critical to fostering lifelong careers for today's senior secondary students.

¹ See Higher Education Information Management System datasets: <https://admin.heims.education.gov.au/HeimsTest/admin/>

Since the DASSH report was published, yet more research has emerged in support of the critical role that HASS will play in the future of work and the Australian economy. For example, in mid-2019 **Deloitte Australia** published “The Path to Prosperity: Why the Future of Work is Human,” which demonstrates that human-centred skills (such as those refined during engagement with HASS disciplines) are, and will increasingly be, the most in-demand skills for the Australian workforce.²

Deloitte continue to regularly publish reports on this topic, both in an Australian context and from an international perspective, arguing that “amid continuing skills shortages, a focus on cultivating underlying human capabilities such as curiosity and critical thinking can give companies a sustainable source of the talent they need.”³

Deloitte Australia, 2019, The Path to Prosperity: Why the Future of Work is Human (p. 21)

Ordinarily, we hear about technical skills shortages, or shortages in ‘work of the head’. Think science, technology, engineering and math (STEM), or mining engineers. The data reflects that there are some shortages in these skills – confirming some common perceptions. However, by far the most in-demand skills relate to core functions within the workplace – critical skills which feature in all types of work. For example, 96 percent of Australian jobs require time management and organisational skills, 97 percent of Australian jobs require customer service skills, and 70 percent require verbal communication skills. Compare that to pure technical skills – the most demanded ‘work of the head’ skill is digital literacy – which is required by 87 percent of jobs. And manual labour skills – work of the hands – are required in 43 percent of jobs.

The greater focus on ‘work of the heart’ in the labour market is about inherently human skills. This is where humans excel and where digital technology has been less successful in automating or augmenting human effort.

Director of the **Malcolm Wiener Center for Social Policy** at the Harvard Kennedy School and Professor of Public Policy, David Deming, has written extensively in 2019 and previously on the ability of a liberal arts (HASS) education to prepare students for long-term success by cultivating skills that are required in and can adapt to rapidly changing workplace needs and environments.⁴ In a column published by New York Times in September this year, Prof Deming wrote that while the “traditional liberal arts curriculum includes subjects, like philosophy and literature, that seemingly have little relevance in the modern workplace [...] many of the skills most desired by employers are also quite abstract.” Further, he explains that, “even on narrow vocational grounds, a liberal arts education has enormous value because it builds a set of foundational capacities that will serve students well in a rapidly changing job market.”⁵

² Deloitte Australia, 2019, The Path to Prosperity: Why the Future of Work is Human

<https://www2.deloitte.com/us/en/insights/focus/technology-and-the-future-of-work/building-the-lucky-country.html>

³ Deloitte Insights, 2019, “Skills change, but capabilities endure”, <https://www2.deloitte.com/us/en/insights/focus/technology-and-the-future-of-work/future-of-work-human-capabilities.html>

⁴ See for example, Deming, D.J., Noray, K. 2019, “STEM Careers and the Changing Skill Requirements of Work”, NBER Working Paper No. 25065 https://scholar.harvard.edu/files/ddeming/files/dn_stem_june2019.pdf

⁵ Deming, D.J. 2019, “In the Salary Race, Engineers Sprint but English Majors Endure”, New York Times, <https://www.nytimes.com/2019/09/20/business/liberal-arts-stem-salaries.html>

Prof David Deming, 2017, The Value of Soft Skills in the Labor Market

Between 1980 and 2012, social skill-intensive occupations grew by nearly 12 percentage points as a share of all U.S. jobs. Wages also grew more rapidly for social skill-intensive occupations than for other occupations over this period. In contrast, both employment and wages grew more slowly for occupations with high math but low social skill requirements, including many STEM jobs. Directly comparing the returns to social skills in the NLSY 1979 and 1997 surveys, I find that social skills are a significantly more important predictor of full-time employment and wages in the more recent cohort. Employment and wage growth have been especially strong for professional jobs that require both analytical and social skills. In today's economy, workers must be able to solve complex problems in fluid, rapidly changing, team-based settings.⁶

Back in Australia, The Australia Institute's **Centre for Future Work** published a report in October which noted that regardless of "claims of a STEM-graduate deficiency, science and mathematics graduates experienced some of the worst full-time work outcomes, with only 65 per cent finding full-time jobs within four months of graduation."⁷ Furthermore, the authors commented that, "despite popular derision of arts degrees, industry leaders now actually want more arts graduates in their workforce – given their training in abstract, critical methods of inquiry [...] Many Australian employers in creative digital fields, for instance, now prefer employing humanities and social sciences graduates (rather than programmers), precisely because they 'know how to learn'."⁸

Concluding Remarks

In light of the changing nature of the global economy, a review of the post-secondary school pathways presented to students is a timely initiative. As outlined above, most career pathways will require some degree of familiarity with the skills fostered in the HASS disciplines, and virtually all workers can expect to benefit from training in HASS skills. Given this, it is critical that Australian governments, research institutions and universities support these disciplines by prioritising HASS teaching and research. Furthermore, from a policy standpoint, we must avoid presenting Science, Technology, Engineering and Mathematics (STEM) disciplines as in opposition with HASS disciplines.

Building and providing ongoing support to an innovative, globally competitive cohort of HASS academics will ensure Australia's future generations of workers have access to world-class training and ideas. Increasing the prominence and reputation of HASS expertise in broader society will help promote greater interest from senior secondary students as they make decisions about their immediate post-secondary pathways, and help them to recognise the necessity of HASS skills for their own careers.

⁶ Deming, D.J. 2017, "The Value of Soft Skills in the Labor Market", NBER Reporter 2017, Number 4, <https://data.nber.org/reporter/2017number4/deming.html>

⁷ Pennington, A., Stanford, J. 2019, The Future of Work for Australian Graduates: The Changing Landscape of University Employment Transitions in Australia, https://www.futurework.org.au/the_future_of_work_for_australian_graduates

⁸ Bruce, M. 2019 "Why the university system is failing our graduates", The New Daily, <https://thenewdaily.com.au/money/work/2019/10/22/australian-university-graduate-jobs/>



Humanities, Arts and Social Sciences (HASS) Degrees: Powering Workforce Transformation Through Creativity, Critical Thinking and Human Interaction

With HASS graduates comprising almost two thirds of Australia’s future workforce it is essential that their contribution is properly understood.

As work is transformed by accelerating automation and digitisation, skills such as problem solving, communication and design thinking are among those most in demand by employers. This is particularly true in technical fields where collaboration is recognised as key to translating technical and scientific developments into societal advances. As industry and society adapt to new ways of working, business reconnects with people and traditional career trajectories give way to portfolio careers and the gig economy, enterprising and entrepreneurial skills will be increasingly necessary to individuals and organisations.

In contrast with the ‘technical and specialist skills’ associated with STEM, there is no readily available shorthand for HASS. This report reviews recent literature and analysis to make the case for a clearer articulation of the value of HASS in the context of Australia’s future workforce.

The key messages of this report are:

1. HASS supplies two thirds of Australia’s workforce
2. The contribution of HASS has been undervalued
3. HASS skills are highly prized by all industry sectors
4. HASS skills are increasingly relevant to Australia’s future workforce
5. Everyone benefits from improved understanding of HASS

1. HASS supplies two thirds of Australia's workforce

The Humanities, Arts and Social Sciences, or HASS disciplines, occupy a significant place in Australian education, work and life. Their combined popularity has seen sustained levels of student enrolment, with 64% of graduates entering the workforce from higher education doing so with a qualification in HASS.⁹ The versatility and diversity of HASS subjects make them widely accessible and broadly appealing, adding to their popularity among learners of all ages and all stages of education. A HASS education equips workers with essential skills to participate in the workforce and to make meaningful contributions to wider society.

The Council for the Humanities, Arts and Social Sciences (CHASS) provides a description of HASS.

What is HASS?

The Humanities, Arts and Social Sciences (HASS) are critically important to Australia. They play a key role in the national innovation system and underpin the development of our society, culture and individual identity. CHASS works towards greater recognition of people, projects and organisations working in the sector and to strengthen their capacity to contribute.

A 2008 report on the sector by the London School of Economics for the British Academy identifies a broad group of academic disciplines dedicated to the study of society, the economy, business, governance, history and culture. Researchers are also identifying the emergence of new disciplines to tackle some of the major challenges facing contemporary society and cross over with the traditional science areas.

A small sample of these disciplines indicates the breadth and importance of the HASS disciplines. In the humanities, these include philosophy, languages, literature studies, history and anthropology. In the social sciences, they include economics, sociology, education, social policy, social work and demography. Emerging areas of crossover include law, linguistics, cultural studies and geography, while the creative arts areas cross into design, architecture and landscape architecture.

Together these disciplines drive activity in major organisations and institutions across Australian society and are major contributors to prosperity and productivity growth. Research, design and development are dependent on their new knowledge. Publishers and museums and galleries are major organisations using HASS skills and knowledge to reach out to Australian communities, while in our universities and research institutions there is a rich tradition of academic study, which give students and graduates knowledge to take a role as citizens and community members.¹⁰

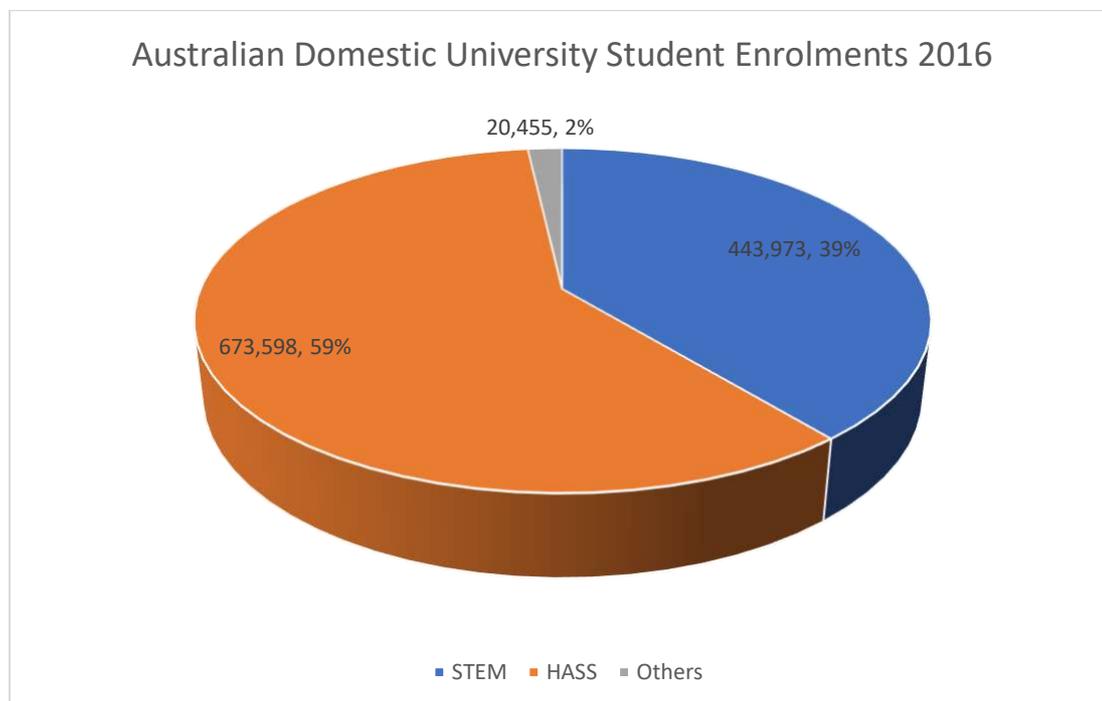
In Australia, the sustained popularity of the HASS disciplines among young people is evidenced by the size and strength of higher education programs, with HASS students accounting for almost two thirds of Australia's domestic enrolments. The humanities are the disciplines in highest demand for tertiary study and students in the humanities, culture and social sciences, social work and communication areas are among the most satisfied with their overall education experience.¹¹

⁹ Australian Academy of the Humanities (2014) [Mapping the Humanities, Arts and Social Sciences in Australia](#).

¹⁰ Adapted from 'What is HASS', Council for the Humanities, Arts and Social Sciences accessed 28 August 2018.

¹¹ QILT (2017) [Graduate Outcomes Survey](#) Table 40.

Australian Domestic Student Enrolment, 2016 ¹²



Field of Education	Number of enrolments	Proportion of enrolments
HASS	673,598	59%
Education	120,598	10.6%
Management and Commerce	190,110	16.7%
Society and Culture	282,900	24.9%
Creative Arts	79,990	7.0%
STEM	443,973	39%
Natural and Physical Sciences	99,071	8.7%
Information Technology	32,376	2.8%
Engineering and Related Technologies	67,729	6.0%
Architecture and Building	24,377	2.1%
Agriculture Environmental and Related Studies	14,271	1.3%
Health	206,149	18.1%
Others	20,455	2%
Food Hospitality and Personal Services	2,362	0.2%
Mixed Field Programs	11,193	1.0%
Non-Award course	6,900	0.6%
Total	1,138,026	100%

¹² <http://highereducationstatistics.education.gov.au/> Data Cube (accessed 1 September 2018).

2. HASS skills are highly prized by all industry sectors

Analysts agree that specialist technical skills deliver results most effectively in combination with skills of creativity and communication and with emphasis on human factors. Deloitte have demonstrated that ‘design lies at the heart of the IT worker of the future’, and that ‘designing engaging solutions requires creative talent’ drawn from graphic designers, user experience engineers, cultural anthropologists, and behavioural psychologists.¹³ The Regional Australia Institute predicts that the most in-demand jobs in Australia by 2030 will mix high tech, high touch, and high care activities.¹⁴ The link between HASS and innovation also has been recognised by the Senate Standing Committee for Economics and the Business Council of Australia.¹⁵

Deloitte (2016) The Future of the Workforce: Critical drivers and challenges

It is about balance: technical skills are not sufficient by themselves. Problems are much more likely to be solved in teams, meaning that employers will require a range of other cognitive skills and abilities from their workers, such as complex problem solving, reasoning, comprehension, and social. These skills lend themselves to the application of technical skills, which have arguably been in demand for many years, but again are growing in importance. The effects of this are already evident in the United Kingdom and Australia, where official statistics show that graduates of STEM subjects have, in some cases, significantly higher unemployment rates than graduates of non-STEM subjects like the humanities.

In markets where there has been such a focus on STEM skills development, it is easy to lose sight of the importance of these broader skills and therefore overlook providing quality education in this area, which incidentally, are skills not yet easily replicated by machines.

While ‘non-technical’ skills are critical components of 21st century employability, they are also in short supply globally. Research from the UK, based on a survey of 91,000 British businesses, shows that soft skills are associated with between 33%-40% of all reported skills-shortage vacancies.¹⁶ In a 2002 federal government survey, all businesses identified the importance of skills including communication, problem solving, self-management and initiative in new hires.¹⁷ Even in specialised vocations such as IT, executives now rank ‘liquid skills’ over deep expertise.¹⁸ Further, the demand for ‘non-technical’ skills is increasing. The World Economic Forum (WEF) suggests that by 2020, overall social skills will be in higher demand across industries than narrow technical skills. Australian employers now ask for ‘enterprise skills’ as often as technical skills.¹⁹

¹³ Deloitte Insights (2015) [Tech Trends 2015: The Fusion of business and IT](#), p. 11.

¹⁴ Regional Australia Institute (2016) [The Future of Work: Setting Kids up for Success](#).

¹⁵ Business Council of Australia (2014) [Building Australia's Innovation System](#).

¹⁶ A. Norton & B. Cakitaki (2016) [Mapping Australian higher education 2016](#), Grattan Institute.

¹⁷ Australian Chamber of Commerce and Industry, Business Council of Australia & Department of Education, Science and Training (2002) [Employability skills for the future](#).

¹⁸ Accenture (2016) [Trend 2. Liquid Workforce](#).

¹⁹ World Economic Forum (2016) [The Future of Jobs](#) p. 3.

Foundation for Young Australians (FYA) report in *The New Basics* that the proportion of (Australian) jobs that demand digital literacy has increased by 212%, critical thinking by 158%, creativity by 65% and presentation skills by 25%.²⁰ Finally, according to the *Graduate Careers Australia* survey, 23% of employers reported that they would have recruited more graduates had the candidates been equipped with better non-technical skills, particularly communication.²¹

Office of the Chief Scientist (2014) Science, Technology, Engineering and Maths: Australia's Future

The value of our investment in STEM will be diminished if our practitioners operate without due regard for Australians, and their wants, needs, aspirations and concerns. STEM must therefore relate to valuable work in the social sciences and humanities. These disciplines are critical to our understanding and recording of our world: our cultures, our knowledge of society and the relationships within society. Work in the social sciences and humanities is vital to our deep understanding of the social context. Their contribution will contribute to a creative and innovative Australia. It is this context that will influence the extent to which STEM can be effective.²²

3. The contribution of HASS has been undervalued

Typically considered 'hard' subjects, the STEM disciplines have tended to attract students in fewer numbers than HASS. This has led to a variety of initiatives, spanning many decades, to quantify and articulate the benefits of STEM for industry, the economy and society and to promote uptake engagement and investment. With STEM routinely characterised as 'difficult', 'important' and 'relevant', HASS subjects now risk being seen as 'easy', less important and less relevant by employers and wider society.

Anna Moro, Associate Dean, Humanities, McMaster University

I don't know why we call them 'soft skills.' They're certainly not easy to learn, although they are as valuable and necessary as the skills doctors use in surgery, bankers use to assess risk and physicists use to split atoms. Communication, observation, empathy and logical thinking: These precious and frequently undervalued skills have everyday names.

I prefer to call them 'essential skills,' because we all need them every day, though we don't always use them well. They are the foundational skills that allow us to learn and live and work productively with other people. They are the skills that determine our chances of succeeding. They are the skills of leadership.

These essential skills are the ones most sought by some of the largest, most successful organizations. Those blue-chip employers recognize that their future leaders are people who can understand and communicate about the world around them, who can see the whole picture and find ways to fit into it.²³

²⁰ Foundation for Young Australians (2016a) [The New Basics](#).

²¹ A. Norton & B. Cakitaki (2016) [Mapping Australian higher education 2016](#), Grattan Institute, p. 71.

²² Office of the Chief Scientist (2014) [Science, Technology, Engineering and Maths: Australia's Future](#).

²³ A. Moro, *The Conversation*, 06/06/18 [How a humanities degree will serve you in a disruptive economy](#).

Attempts to articulate the value of the humanities are often framed with reference to the broader lack of understanding of the nature and value of the skills being described. As Moro, Bridgstock and others explain, job specific terminology and empty terms such as ‘non-technical’ or ‘generic skills’ do not reflect the scale and breadth of what HASS graduates can do.²⁴ This not only undermines the value of HASS education but limits the ability of graduates to realise the full benefit of their education in the workforce and wider society.

4. HASS skills are increasingly relevant to Australia’s future workforce

There are many predictions for rapid transformations in how we live, work and learn: in August 2018, a google search into the ‘future of work’ delivered over two billion results.²⁵ According to WEF’s 2016 report on the *Future of Jobs*, some 65% of children entering primary school today will work in jobs that do not yet exist.²⁶ Reports by organisations such as the Business Council of Australia, CSIRO, Deloitte, Ernst and Young, WEF and NESTA present analysis and projections for workforce disruption in Australia and around the world, each identifying a range of drivers for change and their anticipated impacts.

The Business Council of Australia (2017) Future-Proof Protecting Australians Through Education And Skills

- Technology will largely replace tasks and activities, rather than whole occupations.
- As technology reshapes the tasks and activities that people perform, our economy will increasingly become the domain of skilled workers who can harness and augment technology.
 - The very nature and type of jobs that people perform is changing.
 - Digital peer-to-peer platforms will allow people to perform a range of jobs at once or pursue their own entrepreneurial ambitions in their spare time.
- There will also be growing demand and value placed on non-routine jobs such as carers that require intensive human interaction and interpersonal skills.
- The future workforce is likely to be increasingly mobile across jobs, across employers and geographic boundaries.
- To prepare for the jobs of the future, our schools, VET and HE sectors will need to operate as one system, providing Australians with a strong foundation, and being available and responsive to Australians throughout their working lives.
- In this new world, a qualification based on technical skills and knowledge is unlikely to be enough. Employers will be looking for a mixture of values such as accountability, honesty and a work ethic, behaviours such as adaptability, collaboration and resilience, and skills such as business literacy, critical analysis and problem-solving.²⁷

²⁴ R. Bridgstock (2009) '[The graduate attributes we’ve overlooked: Enhancing graduate employability through career management skills](#)', *Higher Education Research & Development*, 28(1).

²⁵ Ernst and Young (2018) '[Can the universities of today lead learning for tomorrow?](#)'

²⁶ World Economic Forum (2016) '[The Future of Jobs](#).'

²⁷ The Business Council of Australia (October 2017) '[Future-Proof Protecting Australians Through Education And Skills](#).'

In spite of the volume of material available on workforce transformation, limited analysis has been done about the specific contribution to be made by HASS graduates. In many reports, such as those from the Office of the Chief Scientist (2016), the Business Council of Australia (2017) and WEF (2018) highlighted in this study, HASS skills are identified (often anonymously) as key aspects of a response to technological and other forms of disruption, but without any detailed consideration of the implications for the future of HASS education.

Digital Disruption

World Economic Forum, Global Competitiveness Report 2017–2018

The pace and disruptiveness of technological change are creating unprecedented opportunities and challenges that are set to be amplified by the convergence of digital, physical, and biological technologies that are characterizing the emerging Fourth Industrial Revolution.

These emerging technologies have immense potential to be a source of growth, but their future evolution is uncertain. A key challenge is how to unlock their potential in a way that benefits society as a whole given that they can profoundly reshape the national and global distributions of income and opportunities and lead to significant structural transformations.²⁸

The automation of tasks that previously relied on human labour and rapid advancements in digital technologies are the most widely researched and publicly discussed trends in the future of work literature. According to a 2015 report by PricewaterhouseCoopers, 44% of Australian jobs will be affected by automation in the next decade or two.²⁹ The Foundation for Young Australians reports that up to 70% of young Australians are getting their first job in roles that will either be radically changed or lost in the next 10-15 years due to automation. With today's education largely aligned with old patterns of employment, as many as 60% of current students are still being trained for these jobs.³⁰

In its 2016 report, *Tomorrow's Digitally Enabled Workforce: Megatrends and scenarios for jobs and employment in Australia over the coming twenty years*, the CSIRO speculates on possible future job types resulting from impending digital technology disruption. New roles with an emphasis on human factors are forecast in areas such as complex decision support analysis, customer experience, personalised health and online chaperoning.³¹

On 19 October 2017 the Australian Senate established a Select Committee on the Future of Work and Workers to report on the impact of technological and other change on the future of work and workers in Australia.³² According to analysis by QUT's Real World Futures team, 'There is a consistent view across the groups the Senate committee is hearing from that the worker of the future will need technical skills but will

²⁸ World Economic Forum (2017) [Global Competitiveness Report 2017–2018](#).

²⁹ PricewaterhouseCoopers (2015, April) [A Smart Move: Future proofing Australia's workforce by growing skills in science, technology, engineering and maths \(STEM\)](#).

³⁰ Foundation for Young Australians (2015) [The New Work Order](#), p. 2.

³¹ CSIRO (January 2016) [Tomorrow's Digitally Enabled Workforce: Megatrends and scenarios for jobs and employment in Australia over the coming twenty years](#).

³² https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Future_of_Work_and_Workers.

be most likely succeed if they are complemented by creative problem solving ability, strong communication and flexibility for fresh learning.³³ By the time of the extended deadline for submissions in February 2018, over 150 submissions had been made to the Inquiry. The Select Committee was due to report in June but the deadline has been extended twice, possibly as a result of the significant complexity and uncertainty of the future landscape of work in Australia.

Human factors

Deloitte (2017) *The Rise of the Social Enterprise*

The rise of the social enterprise requires a determined focus on building social capital by engaging with diverse stakeholders, accounting for external trends, creating a sense of mission and purpose throughout the organization, and devising strategies that manage new societal expectations. At stake is nothing less than an organization's reputation, relationships, and, ultimately, success or failure.

In this new era, human capital is inextricably tied to social capital. This reality demands a fundamental pivot in how organizations do business today— and how they prepare for the human capital challenges of the future.³⁴

Widespread automation and digitisation will lead to a reduction in reliance on traditional work roles, with a corresponding rise in jobs relying on human factors and face to face interaction. In considering future demands for personalised experience and collaborative teams with diverse skills and backgrounds, the terms 'soft', 'touch', or 'right brain skills' are used to characterise the inter-personal qualities required to manage oneself and one's interactions with others. Such skills are vital where customer service, face-to-face interaction, and working collaboratively are core to the business model. They include communication, teamwork, time-management, decision-making, initiative, and taking responsibility.³⁵

Continued market and labour force globalisation and increasing longevity will drive new approaches to service and communication. WEF recognises the growing importance of 'cultural and civic literacy', the 'ability to understand, appreciate, analyse and apply knowledge of the humanities'.³⁶ Language learning and inter-cultural brokerage are also capacities that meet the demands of a rapidly expanding, and globalised services sector.

New ways of working: flexibility and mobility

Among the future workforce trends identified in the literature are: new modes of work and employment, more volatile career trajectories, increased emphasis on lifelong learning and greater connectivity between an individual's economic and social lives, between work and private life. WEF has identified the 'changing nature of work/flexible work'³⁷ as the top socio-economic trend affecting all industry worldwide. A culture of

³³ QUT Real World Futures report (March 2018) [Future of Work – The State of the Debate](#).

³⁴ Deloitte (April 2018) [The Rise of the Social Enterprise](#).

³⁵ Development Economics (2015, January) [The Value of Soft Skills to the UK Economy](#), p. 3.

³⁶ World Economic Forum (2016) [The Future of Jobs](#).

³⁷ World Economic Forum (2016) [The Global Competitiveness Report 2016-2017](#).

entrepreneurialism will have a strong influence on the structure of the market, with future jobs characterised by flexibility, portfolio and multiple part-time work, job mobility, and greater workplace diversity.³⁸ Today's young Australians may have as many as five different careers and 17 changes in employers over their working lives.³⁹ Survey data suggests that some 30% of Australia's workforce is currently engaged in flexible work, including moonlighting, multiple casual roles, and independent contracting.⁴⁰ These trends are accelerating.⁴¹

A longitudinal study of Oxford University humanities graduates found that hiring and career advancement rely on an 'individual's capacity to continue to learn new technical and other skills, communicate well, and adapt actively in the context of new challenges posed by changes in the economy and society'.⁴² Skills at the core of humanities-based education, such as succinct and persuasive communication coupled with critical analysis, were consistently cited as the basis of this adaptive capacity.

A recent study of the Australian Bachelor of Arts degree identified problem solving and communication as the BA graduate skills that employers most valued.⁴³ These skills are also highly relevant to the business of securing employment and moving between jobs. The flexibility and mobility of contemporary work routines means that developing transferable skills will be essential to long-term job success across multiple sectors. In practice, the flexible nature of contemporary work means that 'career management skills'⁴⁴ are now the key determinate factor in long-term career success.

Deloitte Millennial Survey 2018 – The Australian Cut

New capabilities are needed for new jobs of the future. Lifelong education and training for all Australians needs to prepare both young and old for new and different jobs and employment models. Automation, robotics and artificial intelligence are heightening the importance of skills in creativity, problem solving, advanced reasoning, complex judgement, social interaction and emotional intelligence. An objective for trainers and educators is to equip students with skills, knowledge and capabilities which are complementary to advanced artificial intelligence (not attempting to compete with it). Job tasks which are routine, repetitive, structured and rules-based are likely to be automated over coming decades. Training in specific tasks of this nature may hold lesser value than learning enduring concepts, knowledge and capabilities.

In these regards, the creative sector is expected to become increasingly important as a contributor to the national economy and the job market. Existing and new jobs are likely to require a creative approach to perform non-routine tasks and solve problems, while future workers are likely to appreciate an opportunity to act creatively.

³⁸ KPMG (2015) *Super Connected Jobs: Understanding Australia's Future Workforce*.

³⁹ McCrindle Research (2014) *'Job mobility in Australia'* using HILDA and Department of Employment data. *CS – I'm not sure if this is the right link. The link used didn't work.*

⁴⁰ D. J. Edelman (2014) *Freelancing in Australia Study: A National Survey of the New Workforce*.

⁴¹ ACMA (2013) *Home is Where the Work is*.

⁴² P. Kreager (2013) *Humanities Graduates and the British Economy: The Hidden Impact*. Oxford: Oxford University Press, p. 3.

⁴³ N. Harvey & M. Shahjahan (2013) *Employability of Bachelor of Arts Graduates*

⁴⁴ R. Bridgstock (2009) *'The graduate attributes we've overlooked: Enhancing graduate employability through career management skills'*, *Higher Education Research & Development*, 28(1), 31-44.

The physical mobility of labour is now so normalised that a 2014 survey of over 20,000 people worldwide found nearly two-thirds of respondents were already working abroad or willing to move overseas for work.⁴⁵ The movement towards globalisation is further accelerated by new technologies, which make it possible for people to work offshore to provide services. By one estimate, up to 11% of service sector jobs in Australia could be filled by overseas workers.⁴⁶ The increasing normalisation of a globalised workforce presents new opportunities for people to choose when and where they work, and to adopt more flexible working practices.

5. Everyone will benefit from improved understanding of HASS

World Economic Forum, Global Competitiveness Report 2017–2018

Often the deep web of connections that link growth to broader societal values remains unspoken. Instead of focusing on welfare, the measurement of economic progress and consequently economic analysis and policy are dominated by headline GDP numbers, encouraging the confusion of means and ends. Yet economic growth should not be an end in itself. It should contribute to human welfare, be rooted in political legitimacy, and be defined and measured based on a multidimensional notion of economic progress.

NESTA's 2017 report on the Future of Skills⁴⁷ strongly emphasises the need to consider increased automation alongside 'other relevant trends, including globalisation, population ageing, urbanisation and the rise of the green economy.' The report identifies a tension between our 'economic and social lives' as 'structural change once again disrupts employment levels and occupational patterns', concluding that: 'History is a reminder that investment in skills must be at the centre of any long-term strategy for adjusting to structural change'.

Just as science, technology, engineering and maths will play a key role in our technologically advanced future, it is evident that the transformation of society will be powered in large part by creativity, critical thinking, human interaction and design. The HASS disciplines are indispensable but undervalued in this context.

Acknowledgments

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⁴⁵ BCG and The Network (2014) [Decoding Global Talent](#).

⁴⁶ D. Farrell, M. Laboissière, R. Pascal, J. Rosenfled, C. de Segundo & S. Stürze (2005) [McKinsey Global Report Part 1: The Emerging Global Labor Market: The Demand for Offshore Talent in Services](#).

⁴⁷ NESTA (2017) [Future of Skills: Employment in 2030 p. 16](#).