

LEE HECHT
HARRISON

EDITED BY
DR ROD GUTIERREZ

THE UNIVERSITY FOR THE FUTURE

EVOLUTIONS, REVOLUTIONS
AND TRANSFORMATIONS



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Georg Hirschi

Director - Commercial & Innovation



Preface

Lee Hecht Harrison (LHH) is a global human capital consulting company with a substantial footprint in the Australian higher education sector. In January 2016, the Australian Higher Education Industrial Association (AHEIA) released a report titled *Higher Education Workforce of the Future*, outlining the upcoming challenges to be faced by the tertiary sector in the next 10 to 15 years. One of the main conclusions from the report was that there is an urgent necessity for a flexible education workforce ready to adapt to the changing market conditions. Whilst the report was a great beginning to this dialogue, we felt that more needed to be discussed in relation to the practicality of such a transformation. LHH conducted interviews with key leaders in the sector from major Australian and New Zealand universities to determine how well equipped universities are for the changing structure and to identify areas which need

to be reformed. The report also contains chapters from invited authors who provide insights from within the sector as well as from private enterprise.

Under the editorship of Dr Rod Gutierrez, Director of Higher Education Strategy at LHH, this publication discusses the requisite elements of the tertiary sector transformation ‘we have to have’ from an applied and implementation-focused standpoint. Primary research was conducted with key leaders (vice-chancellors, deputy vice-chancellors, human resources (HR) directors (HRDs) and other leaders in the sector, elucidating the requirements and readiness for implementing a significant transformation agenda. In addition, chapters from highly credentialed authors in the publication discuss the issues further and provide unique insights. This substantive piece of work is

followed by a set of recommendations that provide practical and wide-ranging considerations for the sector.

Fuelled by uncertain funding models, rigid workforce systems and changing student demands, universities are exploring how to remain relevant in an increasingly differentiated and global education market. This sector is currently trying to balance a variety of stakeholder interests and needs to make fundamental choices to ensure its sustainability. This publication provides an opportunity for university executives to reflect on the future state—addressing the ‘what to transform into?’ question, and to undertake a gap analysis in regards to the current versus future capability, competence and capacity to implement transformation—addressing the ‘how do we get there?’ question.

CHAPTER SUMMARIES

01

The Higher Education Sector: Where Have We Been and Where are We Now?

Yana Halets

The Australian tertiary education sector is currently undergoing a major structural change. Chapter 1 explores the significant developments and reformations taking place and the context behind these changes. The first section examines the role of government-commissioned reviews in shaping higher education funding and, ultimately, the structure of the sector. The second section brings focus to the current university funding models and summarises emerging trends. The final section identifies two challenges that need to be considered for the development of the University for the Future, and aims to answer the following questions:

- With the expectation of decreased funding from the government, universities are conducting major internal structural changes. How have the developments in new funding arrangements affected the academic staff and the quality of teaching and research output? What will be the new role of the University for the Future?
- The rise of technological educational tools would mean that, more than ever, students will be able to access educational resources remotely. How will the technological shift in education affect student experience and learning?

02

The View From the Top: Findings from Interviews Conducted with Australian University Vice-Chancellors and Human Resources Directors

Dr Rod Gutierrez

LHH has conducted numerous interviews with several key leaders in the university sector, including vice-chancellors, HRDs and other major university stakeholders, representing Go8, regional and technology universities. The results highlight the diversity that is found in the sector with a wide-ranging set of views implicating the transformation that is necessary across the sector. The interviews have been content analysed and the major themes are presented for discussion. Themes in Chapter 2 include:

1. Funding and return on investment
2. Industrial reform
3. Innovation, differentiation and competition
4. The emerging role of universities: Complex cognition
5. Leadership in the new age.

Recommendations based on the themes are made together with a discussion of the systemic organisational and individual enabling factors that will become imperative to successful sector transformation.

03

Community Impact and External Partnerships: From Transactions to Partnerships in Innovation Systems

Dr John H Howard

Collaboration and cooperation between universities and businesses is fast on the rise, moving from short-term transaction-based relationships into longer-term partnerships. This movement requires the development and application of skills and systems to fulfil both sectors' missions and capacity for the negotiation and execution of what are effectively 'instruments for engagement' that involve senior executive level input from all parties. Chapter 3 will consider the following:

- How will both parties accommodate and respect the differing missions of universities and businesses? Is it likely for the missions to converge or diverge as partnership grows?
- What are the 'instruments of engagement' that need to be used to build and sustain relationships between universities and businesses?

04

The Student of the Future

Dr Onnida Thongpravati

Australia's future, productivity and innovation quality lies with its people and human capital, and the government is looking to the tertiary sector to increase its performance. Universities should embrace the change as a valuable opportunity and consider reconfiguring and altering internal resources and capabilities in advantageous ways to improve their performance and create sustainable competitive advantage. Chapter 4 provides a starting point of consideration and general guidance into the future of education and the future needs of students, answering the following questions:

- With growing focus on entrepreneurship and innovation skills in the industry sectors, what are the critical must-have skills for the student of the future?
- How should universities approach designing education and training programs? What structures and features should be considered to prepare the student best?

05

An Opinion on Leadership in the New World

Brad Griffiths

Leadership in organisations is a continuously evolving process, with increasing speed of change in markets and growing diversity of the workforce pushing leaders to adapt quickly to new environments. Unlike their business counterparts, universities have been slow to adapt to new strategies and continue to rely on older models of leadership. As the environment becomes more volatile and unpredictable, this approach is no longer suitable and university leaders need to look to organisations for innovative leadership strategies to ensure that the sector is ready for the changing environment. Chapter 5 also identifies the need for leadership development in the three key areas: culture, individual performance and change. The chapter will discuss the following points:

- What is the best approach to changing the leadership model used in the tertiary sector?
- Which elements need to be addressed to improve adaptability?
- Which strategies can be used by leaders to develop culture, individual performance and change?

06

Human Resources Transformation: People, Process, Structure and Systems

Peter Watson

Human resources (HR) transformation in the higher education sector can make a strategic contribution to building universities that are well equipped for the new century. The transformation will require an honest self-assessment of current service levels, systems, processes and competencies by the HR teams, and careful identification of needs for the future. Furthermore, as part of the transformation, HRDs and academic leaders must take greater responsibility for people management in a way that empowers staff and builds engagement. However, a new question also arises: how can HR undergo a transformation while it is also required to support organisational change in universities? Other questions are also considered in Chapter 6:

- Senior academics and professional staff interviewed for this publication have identified building the capability of HR as a top priority. What actions are needed to build HR's transformation capability?
- Will HR transformation compromise the team's role of the 'employee champion' and, if so, what actions are needed to manage this change?



Yana Halets

Yana Halets is a provisional psychologist, researcher and university student currently specialising in change management and organisational development. Her key area of interest is understanding how the emergence of new technologies is affecting organisational structures.

Yana has experience as a Research Assistant for the School of Psychology, University of Sydney and Project Manager for The Learning Factor. She has also presented at the Australian Conference on Personality and Individual Differences. Yana is currently completing a Masters of Organisational Psychology (Macquarie University) and holds a Bachelor of Psychology (Honours I) (University of Sydney).

The Higher Education Sector: Where Have We Been and Where are We Now?

Within recent years, the Australian higher education sector has experienced major structural reformations. Growing national and international demands have forced the tertiary education system to re-examine its current funding models and develop new strategies to adapt to the changing environment.

This chapter will examine the past and current state of the Australian tertiary education sector, with close attention to contributing factors that have affected the state of the higher education system.

First, we will begin by examining the history of the Australian tertiary education sector and discussing the role of government reviews on shaping the structure of the sector. Next, we will look at the current state of the tertiary sector, with emphasis on the current funding models and their longevity. In the third

and final section of the chapter, we will review the emerging trends in the tertiary sector. Growing industry collaboration, a technological shift in delivering education and the changing role of the university are some of the future factors that will also be considered.



Image credit: iStock.com/ 4X-image

Government Reviews

Major developments in the tertiary education system within Australia have been markedly due to the role of government-commissioned reviews. The sector has undergone numerous structural changes following the implementation of recommendations in government-commissioned reports, with the most notable originating from the Dawkins, Bradley and Watt Reviews. The following section will summarise the key suggestions from each review and understand their respective impact on the state of the Australian tertiary sector.

DAWKINS REVIEW (1987)

The *Higher Education: A Policy Discussion Paper*, conducted by the then Labor Education Minister John Dawkins, consisted of several educational reforms that aimed to transform the tertiary education system in Australia. The primary goal set out by the review was to improve the quality and access of education provided by Australian universities, and several significant recommendations were made to achieve this. The most impactful recommendation was the introduction of



income contingent loans, also known as the Higher Education Contributions Scheme (HECS-HELP), in a bid to encourage easier access for people pursuing tertiary education. The loan structure would allow students to delay payment of their tuition costs during their study, after which a repayment percentage would be deducted from their future salary. If students wished to pay upfront, additional discounts would be offered. Following the introduction of the HECS-HELP loan scheme, student university enrolment significantly increased and the goal set out by Dawkins was in motion.

The government implemented a majority of the recommendations outlined in the Dawkins Review. In 1989, the Hawke Labor Government rolled out the HECS-HELP loan scheme across Australia. However, in this scheme the student

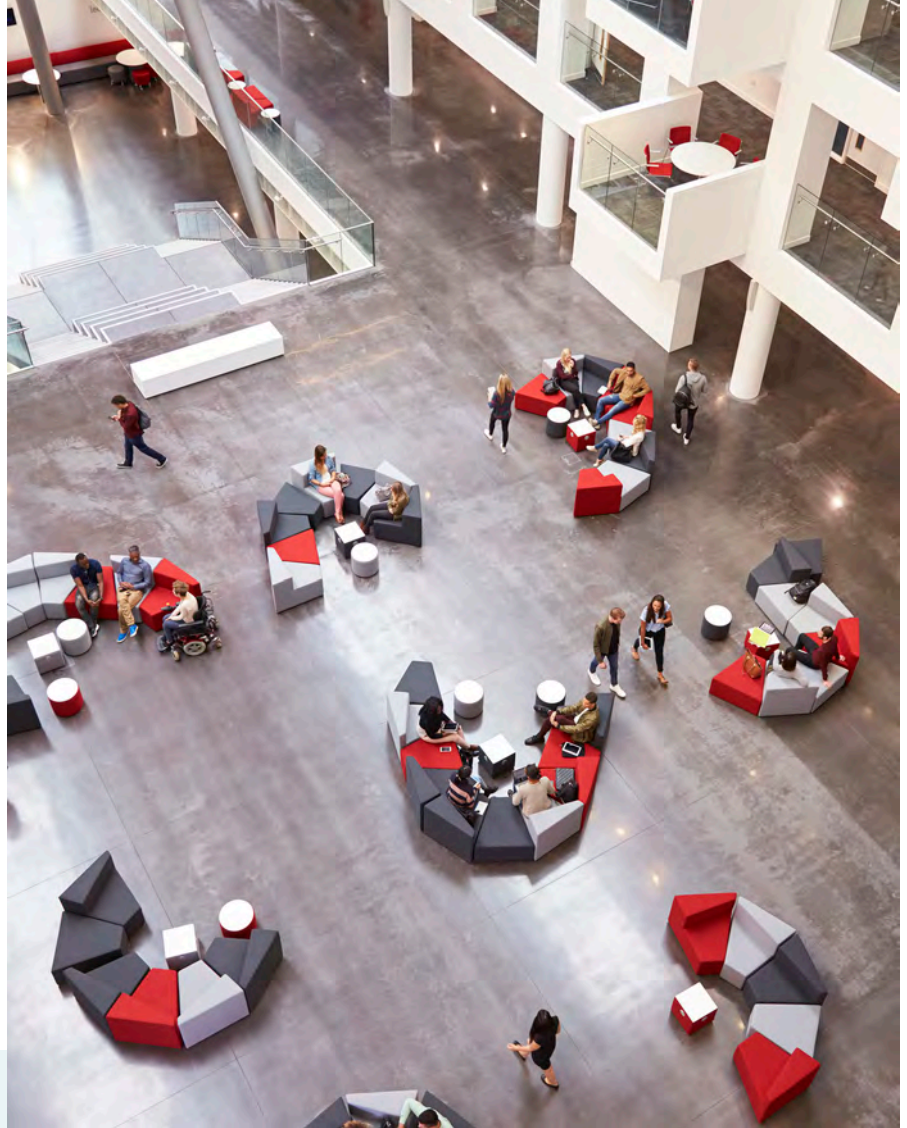
was responsible for paying an initial fee of \$1,800, after which the government would pay the balance. The student could then delay the payment and repay the debt through the tax system and future income. The Howard Government implemented a three-tier system to the loan structure, where university fees would be based on the courses that would generate higher income. Courses such as law and medicine, attracted higher fees and were categorised in the top tier, while the arts was placed into a lower tier.

However, recently, Dawkins has renounced the reforms proposed in his review and has called for a nationwide university fee deregulation. According to his recent commentary, the reforms initially proposed in the review are 'out of date' for the current day, urging the need for greater competition between universities.⁷

BRADLEY REVIEW (2008)

The *Review of Australian Higher Education*, conducted by Professor Denise Bradley, was commissioned by the government to examine the future of the tertiary education sector. The focus of the review was to provide suggestions for improving Australia's standing in the global education market and promote a higher level of equity for future students. The following two goals were set by the review:

- **40%** of the 25-34 year old population to hold a bachelor-level qualification by 2020 (compared with 31% in 2007).
- **20%** of all undergraduate enrolments to be students from low-socioeconomic backgrounds.



One of the main reforms suggested by the review was the introduction of demand-driven funding. The recommendation called for the government to introduce a demand-driven system through which public educational providers would be able to determine the number of domestic students enrolling in their undergraduate courses (with the exception of medicine). Other reforms included:

- a revised indexation rate of university funding
- the establishment of a Tertiary Education and Quality Standards Agency (TEQSA)—a regulatory agency tasked with enhancing the quality of university education and supporting accreditation of university courses in Australia
- increasing the eligibility for student income support.

An increase in student numbers has been accompanied by a monumental growth in Australian student debt.



In response to the Bradley Review, the Labor government implemented the majority of the proposed reforms in an effort to improve access to the tertiary sector. One of the biggest reforms to take place was the ‘uncapping’ of student places by the Gillard Labor government. With the exception of medical degrees, higher education institutions were given control of student enrolment in an effort to enable the demand-driven funding system. Government funding to universities would be based on the number of enrolling students and on the demand created.

During the five-year period following the introduction of uncapped places, domestic student numbers and revenues significantly increased. Commonwealth-supported undergraduate places in public universities increased by 22% between 2009 and 2013, from 444,000 to 541,000.² Because of these changes, universities in total have received \$12.9 billion in funding for teaching students.³ The universities that have benefited the most from the demand-driven system include Deakin University (receiving \$166 million in government funding), Australian Catholic University (ACU), Royal Melbourne Institute of Technology (RMIT) and Curtin University.

While demand-driven funding has proven to be successful in increasing both student enrolment and funding towards the tertiary sector, the movement and its sustainability are under threat, with widespread concerns being voiced by the sector. Group of Eight (Go8) chief executive Vicki Thompson has commented that ‘the value of vocation study has been eroded’ because of a stronger public perception that public university study is of higher value in the social and career contexts. Furthermore, an increase in student numbers has been accompanied by a monumental growth in Australian student debt. The Parliamentary Budget Office has estimated the debt to the government to increase from 13.5 billion to 48.1 billion,⁴ reaching \$200 billion by 2024–2025. Secondly, uncapped places are posing a problem for vocational institutions (e.g., TAFE), with 35,000 fewer students undertaking study or trade apprenticeships.⁵

Another pressing issue that needs to be considered is the oversupply of graduates in a limited job market.⁶ Due to the increase in the number of students following the recommended government changes in the review, there has been a growing oversupply of graduates in several career disciplines, including

law, dentistry, journalism and health.

Job prospects are gradually decreasing for recent graduates with only 68% of students finding full-time work within four months of graduation⁷ and others turning to work in a field unrelated to their study. This trend has also led to the over qualification of graduates, with more students entering postgraduate courses to improve their career prospects. Moreover, while domestic student enrolment continues to rise, new research shows that first-year drop-out rates are also increasing, particularly among low-ATAR students.⁸

The goal to ensure 40% of 25–34 year olds have a bachelor degree has almost been met, with

37.2%
of the targeted population
being enrolled in 2014.

However, it appears that the consequences have not been fully considered and have the potential to impact future government policies.

WATT REVIEW (2015)

The 2015 Watt Review (titled *Review of Research Policy and Funding Arrangements*), conducted by Dr Ian Watt, focused on identifying new funding arrangements and research policy reforms for the tertiary sector. In his review, Watt strongly emphasised the need for both university and industry sectors to be better equipped to maintaining relationships, and a set of recommended reforms were proposed. The majority of the recommendations outlined in the report target improvement in research support, training and collaboration between universities and industries.

The most notable recommendation from the report included the design of an 'impact and engagement framework' to measure quality of research output. The exact method through which the quality would be measured was not proposed, but the use of engagement metrics was recommended. The government has announced a national assessment to measure the quality of research output, with the results of the first assessment to be published in late 2016.⁹ Overall, the university groups have responded positively to the review and its recommendations. Vicki Thompson, the chief executive of Go8, has commended the review and its recommendations and expressed support for collaboration with industries.



In 2016, the Turnbull government accepted the proposed recommendations from the review, with 12 of the recommendations incorporated into the *National Innovation and Science Agenda*.¹⁰ The Agenda was formed to generate a so-called 'ideas boom' and to create a strong innovation-focused and high research-skilled science, technology, engineering and maths (STEM) workforce in Australia.¹¹ ¹² One of the major changes has included a shorter turn-around for funding decisions (Australian Research Council (ARC) Linkage Projects scheme). The shorter turn-around is projected to have a major impact on the rate of research publications. In addition, the government has allocated approximately \$1 billion in funding to improve university and industry engagement through 'research block grant' arrangements.

The Watt Review significantly differs from the earlier counterparts, with the focus shifting from student-centric sector development towards the university and industry. The change has come about rapidly and has forced universities to reconsider their funding arrangements and the need for a transformation.



Tertiary Sector Funding

GOVERNMENT FUNDING

The Australian tertiary education sector primarily receives funding from both public (government, research grants) and private (student, business) entities. Following the induction of the Abbott Liberal Government (2013), a move was initiated by the government towards deregulation of the university fee system.

The move was largely driven through reforms proposed by Christopher Pyne, which included 20% funding cuts to the Commonwealth Grant Scheme (CGS) and allowed universities to set their own fees (ultimately enabling university fee deregulation).¹³ Fee deregulation has been met by wide criticism from the media and student bodies. The Go8 and other

university groups have strongly criticised this idea, and with concerns that the move will reduce equity in enrolment, the government abandoned full university fee deregulation in 2016.

However, a 20% cut to university funding and the CGS (outlined in the 2014 Budget) is currently waiting to pass in parliament, which would produce over \$2 billion in savings for the government.¹⁴ Furthermore, a partial fee deregulation for a few select courses is currently being considered by the Turnbull government. The current Education Minister, Simon Birmingham, proposes that the move would apply to a small number of courses and allow more competition between universities.¹⁵ Other changes to university

funding are currently awaiting decision. One of the changes includes a lower income threshold for HECS-HELP loan repayments, lowering from \$54,000 to \$40,000. The change would mean that graduates would be required to begin loan repayments at earlier stages of their careers.

The Liberal government funding arrangements for the tertiary sector have undergone major changes following their introduction by the previous Labor government. It is no surprise that the government is unlikely to follow goals set out by the Bradley Review (2008), with focus shifting to implementing the reforms outlined in the Watt Review.

country's research output and has incorporated the recommendations set out in the Watt Review. The current Turnbull Liberal government intends to spend \$1 billion on education next year, under the National Innovation and Research Agenda.

However, given this change of funding arrangements, future consequences must be considered. For instance, rises in university fees could lead to a decrease in local student enrolments. A similar effect has been observed in the UK where a rise in fees has been accompanied by a 17% fall in student enrolment over three years. It has been estimated that the lost fee income would

It is clear that the tertiary institutions of today can no longer safely rely on the funding arrangements from past governments.



Following the Watt Review, the government aimed to address the concern that Australian universities are falling behind international competitors in research quality and allocated funding. Australia's government spending on research and development (R&D) has continually decreased over the last five years. Current spending as of 2015, is at 0.4% of gross domestic product (GDP), which is low compared with other Organisation for Economic Cooperation and Development (OECD) countries. The Turnbull government has taken on a greater role in developing the

have totalled £1.5 billion (approximately AU\$2.5 billion) over three years.¹⁶ Furthermore, this effect could mean that even partial fee deregulation would impact the growth of low-SES student enrolments into regional universities.

It is clear that the tertiary institutions of today can no longer safely rely on the funding arrangements from past governments. Australian universities are under pressure to seek and invest into alternative arrangements, to maintain their operations.



THE STUDENT FUNDING MODEL

Increasing uncertainty about the future of government funding has forced Australian universities to consider other strategies of generating income through student fees. With the growing threat of fee deregulation and a potential decrease in local student enrolments, universities have shifted their enrolment focus onto other eligible student populations—postgraduate and international students.

There has been a large increase in the number of available Masters and Graduate Diploma courses within the sector in the past few years. Unlike the undergraduate courses, students are required to pay full fees for their courses since the majority of postgraduate courses are not covered by the CGS. Nonetheless, postgraduate courses are becoming a popular option for current students, with a common perception that the qualifications lead to better career opportunities in an already saturated market.

The international student market is also becoming an increasing source of income for the higher education sector. There has been a significant growth in international student enrolments in Australian universities, with over 240,000 international students currently enrolled in universities and 120,000 enrolled in the

vocational education and training sector, as of 2016.¹⁷ The majority of international students originate from Asian, North American and European countries, with enrolments primarily within commerce-based degrees and courses.¹⁸ Interestingly, even though Australia is one of the more expensive countries to study and live in for international students, with a total cost of more than \$38,000 per year, the number of enrolling students continues to grow.¹⁹

Like postgraduate degrees, international student places are not supported by the CGS and students are required to pay full university tuition costs. Australian universities received approximately 17% of their income (approximately \$4 billion) from overseas students in 2014, which is the same as that received by HECS-HELP loan repayments (17%). However, while the new trends in student-based funding appear to be an attractive source of income for universities, the sustainability of this model is unknown and potentially vulnerable to external influencing factors. Therefore, other funding arrangements must be in place to ensure longevity.



THE COLLABORATION MODEL

Industry collaboration is becoming the new source of funding for Australian universities. The sector is moving away from traditional funding models, which relied on government-based funding and grants, to more profitable industry collaborations. However, there are no available reports that outline how the process is progressing.

With funding from ARC becoming increasingly scarce and uncertain, the future of university funding is becoming dependent upon growing industry collaboration. As mentioned by the Watt Review (2015), successful collaboration involves university research departments partnering with counterpart industries on research projects. The most recent development in university funding was the announcement of the National Innovation and Science Agenda by the Turnbull government, which consists of various funding and grant arrangements to boost partnerships with industries and research output.

The Australian tertiary sector is beginning to recognise the importance of collaboration and the benefits it can produce for its research outcomes. Moreover, selected universities are beginning to place greater recognition on academics who collaborate with the industry on research projects and applications.²⁰ Nevertheless, a significant effort needs to be made towards sustaining business collaboration if Australia wants to remain competitive in the global industry. According to the 2014 OECD report, only 3.5% of Australian businesses collaborate with universities, in contrast to 30% in the United Kingdom.²¹

A further positive effect of collaboration is the growth in university–industry coordinated student placement programs to prepare ‘work-ready’ graduates.

A growing number of internships and placements are organised for students in their respective course industry, providing them with relevant industry experience.

The collaboration model has not gone unchallenged, with several parties expressing concern about growing collaboration. Some academic and research staff are resisting the change, citing that universities have ‘the need for academic independence and the purity of the mission’²², and urging that independent research needs to remain separated from the external influence to ensure its integrity.

Emerging Trends and Future Challenges

STRUCTURE OF THE TERTIARY SECTOR

The uncertainty of the funding climate has prompted universities to reconsider the structure of their educational systems and their components. As government funding is on a decreasing trend, universities are shifting their approach internally and developing plans based on restructuring their systems. Some of the major Australian universities have already undertaken transformation. For instance, *The University of Sydney 2016–2020 Strategic Plan*²³ details a major reconstruction of undergraduate degrees, research investment and organisational structure of the university. In line with the newly formed government agenda, the university is also set to increase its research funding from \$50 million to \$150 million, in an effort to boost its global ranking and attract industry partnerships.

The threat of imposing organisational restructure has sparked a 'role confusion' within the Australian higher education providers. There is a strong commonly held belief within the public view that one of the main purposes of the university system is to provide a high level of education, which equips students with necessary workforce skills. However, the shift to research and industry collaboration is creating an impact on how universities approach their teaching and learning quality. Universities are attempting to shift from the traditional role of 'teaching' towards an expanded role of 'research'. A recent report by the Grattan Institute indicated that universities are allocating 20% of teaching surpluses to support research efforts. This approach is also shared on the academic level, with only 30% of academic staff preferring teaching over research activities.

As a result, the organisational structure of university staff has undergone a rapid change. Firstly, there has been an increase in contract-based employment of research staff and growth of 'casualisation'—full-time roles being converted to part-time or casual positions. This is supported by concern among academic staff over the stability of their jobs, with only 35% feeling that their positions are secure.²⁴ However, nearly 80% of academic staff report that their workload has significantly increased over the past five years, meaning that the downsizing of full-time staff has the potential to create further, significant problems.²⁵

In addition, the quality of teaching output offered by the Australian universities is expected to suffer as allocated funding is primarily being spent on research. Important learning factors such as staff/student ratios, class sizes, student satisfaction and engagement are under threat with lower numbers of allocated resources and funding capability. However, this may be unlikely to affect student enrolments. University rankings play an important role in student enrolments due to the 'halo effect'—where high-ranking universities attract more students. As of August 2016, six Australian universities made it to the top 100 global research institutions list for the first time.²⁶ Global university rankings are based on the quality of research output by universities, therefore it comes as no surprise that universities with greater research funding attain higher rankings and student enrolments. It is therefore expected that the government, universities and industries have strong interest in developing research as the sector's primary output.

STUDENT OF THE FUTURE

The changes in funding arrangements between universities, industries and the government are having an effect on the overall student experience, with top universities receiving some of the lower student satisfaction levels in a national survey.²⁷ As a result, Australian university student attrition rates are on the rise, with students feeling that they are often not getting the support from academic staff they needed. It is therefore worth noting how the student experience can be improved in a university system on the brink of transformation, by considering how technological advances in education could support both students and academic staff.

One of the most recent technological developments in education has been the introduction of Massive Open Online Courses (MOOCs), a form of online education that provides tuition and course materials to students for free, without certification. Whilst there was initial concern that the education platform would replace traditional face-to-face teaching, including even the education providers themselves, this concern has mostly been unsubstantiated with 70% of students opposing the scrapping of face-to-face learning.²⁸ In addition, it has also been reported that the primary consumers of MOOCs are students who already have degrees.²⁹ With the growing popularity of MOOCs, universities have embraced the technological trend and a 'flipped classroom' style of learning is gaining popularity. In this style of learning, students are expected to listen to lectures and learn content at home and participate in classroom discussion.

This form of education has several unique advantages as there are no infrastructure-based boundaries, and lower long-term costs and barriers for higher education. Open source platforms are slowly being integrated into university education systems, with major universities (University of Melbourne, University of New South Wales, University of Western Australia) adopting some form of platform (the University of New South Wales developed its own platform called Open Learning).

However, while technological options such as flipped classroom learning offer a potential solution for increasing student engagement, other issues remain. Feedback from the industry points to a lack of necessary skills among recent graduates. Soft skills such as communication and decision-making ability, as well as being 'workforce ready' are some of the reported issues surrounding the lowering rate of graduate employment. The tertiary sector must consider what future teaching and learning strategies need to be implemented to better equip the student in the changing environment.

Concluding Remarks

In summary, it is clear that the role of the Australian education sector has significantly changed over the last 30 years. The first Labor Government reforms aimed to improve the tertiary education system through its human capital by implementing policy changes targeted at increasing student numbers across the nation. However, while increasing access to tertiary education improved student enrolments, the movement is unlikely to be financially sustainable in the long term. Following the announcement of funding cuts by the Liberal Government, the tertiary sector is in urgent need of alternative sources. A collaboration funding model between universities and their counterpart industries is a new funding arrangement proposed by the government aimed to not only increase funding for the tertiary sector but also the quality of research output by the nation. Other challenges remain for the tertiary institutions, such as managing academic staff through internal changes and utilising digitisation to maintain student satisfaction and learning quality. The future state of the tertiary education sector must adapt to these challenges to ensure its sustainability.

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Dr. Rod Gutierrez

Dr Rod Gutierrez is an Australian business leader and psychologist, internationally well regarded in the fields of risk and safety, cultural transformation, and organisational and leadership development. A globally experienced consultant, facilitator and speaker, Rod has worked with some of the world's largest, most complex organisations on solving some of their more pressing problems.

Through his work, he has designed strategies and implementation programs to undertake results-driven business improvements addressing people challenges associated with business transformation. In addition, he has provided executive coaching and advice to senior leaders, CEOs and vice-chancellors for over 15 years. Until recently, he was Global Leader for Capability, Culture and Change Management at the DuPont Corporation.

Rod has collaborated with clients in the fields of financial services, insurance, oil and gas, mining and resources, government, engineering and FMCG (Fast Moving Consumer Goods). He has worked with many of Australia's universities at the strategic level. He holds undergraduate qualifications in psychology from the University of Newcastle, as well as, a PhD from the University of Sydney.

The View from the Top: Findings from Interviews Conducted with Australian University Vice-Chancellors and Human Resources Directors

This piece of primary qualitative research sought to elicit, document and categorise the views of a sample of Australian vice-chancellors, human resources directors (HRDs) and chief operating officers (COOs), regarding their opinions and views pertaining to the future of the higher education sector (HES). A recent AHEIA report highlighted the need for the sector to transform significantly in the coming years in order to remain viable.³⁰ Whilst it appears that most agree on the need the sector faces to transform, much less clarity and agreement is found on the question of how to go about this transformation. Thus, the question remains—what should the sector transform into and by what means?

Method

Semi-structured interviews were conducted with distinct groups of stakeholders in the HES: vice-chancellors, deputy vice-chancellors and HRDs. The participants were selected with the aim of obtaining a broad cross section of representation across the HES in terms of geography, university size, regional versus metropolitan location and relative institutional age.

To encourage openness and depth of discussion of the important issues, participants were advised that their comments would not be directly attributable to them, other than to list the participants in the body of the paper (see Appendix 1). The participants were interviewed mostly face-to-face in interviews lasting from 1.5 to 2 hours. All participants were asked the same questions, as per Appendix 2.



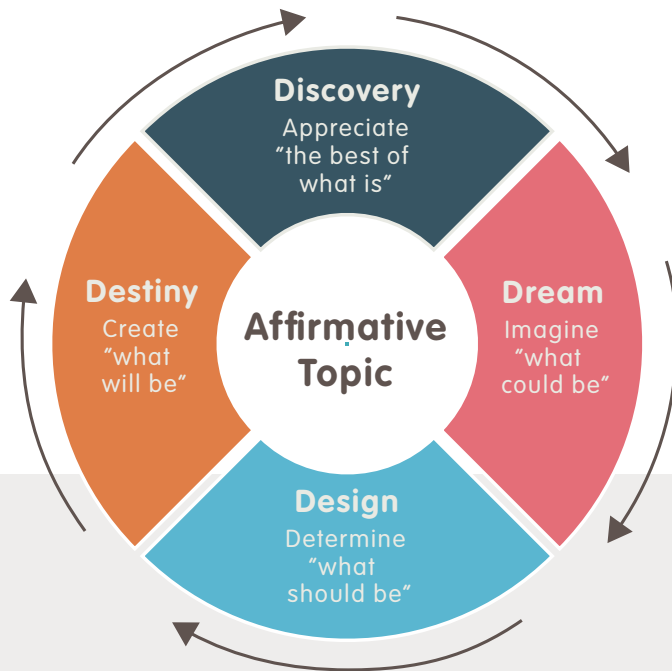


Figure 1. Appreciative Inquiry Approach

DATA GATHERING - ABOUT THE APPRECIATIVE INQUIRY APPROACH:

Appreciative inquiry is a qualitative methodology that lends itself readily to the analysis of 'what is' in order to define 'what could be'.³⁷ It is based on the premise that the interviewer cannot dissociate him or herself from the interview process and that interview questions can and do influence responses from individuals. To this end, the approach implements a positive approach to the questions, which are asked in relation to four main aspects: Discovery, Dream, Design and Destiny (Figure 1).

The four appreciative inquiry areas of focus are briefly described here in turn. Discovery aims at developing an appreciation of the best of what is today. This is followed by Dream, imagining what and how things 'could be'. Design takes participants to the point of considering 'what should', while Destiny aims to focus on 'what will be' and how to make that happen.

DATA REDUCTION AND ANALYSIS:

Thematic Analysis was conducted according to the process described by Braun and Clarke,³² who propose a generic approach for thematic analysis that lends itself readily to the purpose of analysis of this data.

- **Familiarisation with the data, including interview transcripts:** This phase involves reading and re-reading the data, thus becoming familiar with critical content and the location of this content.
- **Coding:** This phase involves generating simple labels to identify important features of the data.
- **Searching for themes:** This phase involves examining the codes and collated data to identify significant broader patterns of meaning or themes.
- **Reviewing themes:** This phase involves checking the themes against the dataset, to determine that each theme is distinct and additive. At this stage, themes are typically refined, which sometimes involves them being split, combined, or deleted.
- **Defining and naming:** This phase involves developing a detailed analysis of each theme, and working out how they interact with other themes.
- **Writing up:** This final phase includes the summarising of a narrative analysis of the data and contextualising the findings in relation to the setting of enquiry.

Results

As one might expect from such a cohort, the data obtained illustrated many strongly held and rich views on the future of HES in Australia.

Often, these views were polarised in their approach to the subject at hand and, given the inherent polarity of the data, this was elaborated on as a way of making sense of the data in terms of the competing and at times contradictory views held by participants.

The interview data was analysed aided by qualitative data software, which facilitated the categorisation, coding and reduction of the data into five main themes:

1. Funding and return on investment
2. Industrial reform
3. Innovation, differentiation and competition
4. The emerging role of universities:
Complex cognition
5. Leadership in the new age.

Funding and Return: Two Sides of the One Coin

One of the most consistent and perennial issues to be raised both by vice-chancellors and HRDs was funding issues in the Australian HES and its impact on the stability of the sector and, consequently, on the quality of education and the perception that the system is under duress and on the verge of decline. Typical responses were as follows:

"We must find a mechanism that increases the unit of research investment and the funding per student, we simply must find more money to keep delivering at a similar level of quality."
VC (Vice-Chancellor)

"There should be a total overhaul of the public funding arrangements for research in this country. When we look at CSIRO, ARC, NHMRC, ANSTO and pool all these resources we really need to ask the question [of] how this research funding is configured and if we are indeed obtaining the best value. My view is that we are not." VC

"When we look at our higher education spending in comparison to OECD standards, we are not even top ten. At the same time, when you look at our competitiveness and resilience we are punching well above our weight. The question is how long can we keep this up?" VC

"One should never look at the funding question in isolation from the return on investment." VC

Australia was the only OECD country that saw a pervasive lack of public contribution to higher education for the decade 1995-2005.



In 2008, Bradley³³ noted that Australia was the only OECD country that saw a pervasive lack of public contribution to higher education for the decade 1995–2005, when this contribution stagnated at 0.7% of GDP. He recommended a significant increase in public funding, which by 2009 saw Australia ranked 25th out of 29 OECD countries, with 1.1% of GDP.³⁴ Public funding of universities has

almost doubled in the intervening decade (2005–2015) and, by 2013, Australia had increased its contribution to 1.3% of GDP, just slightly above the average of 1.29%; however, it was ranked 20th out of 36 OECD countries with available data (Figure 2).³⁵

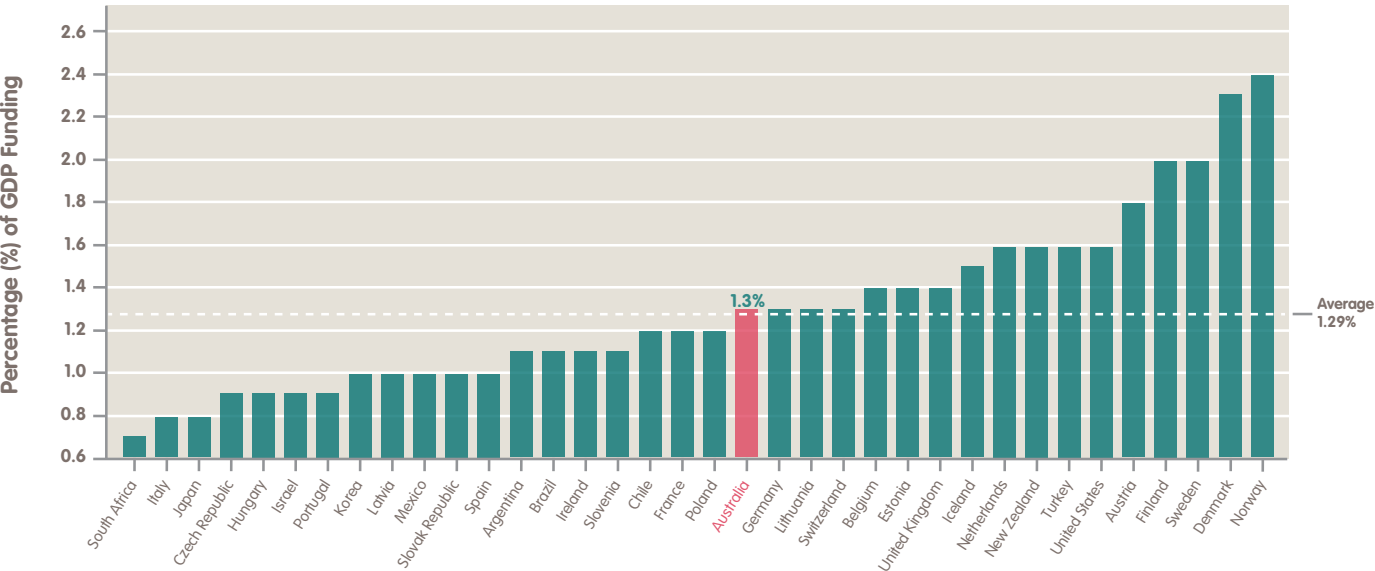
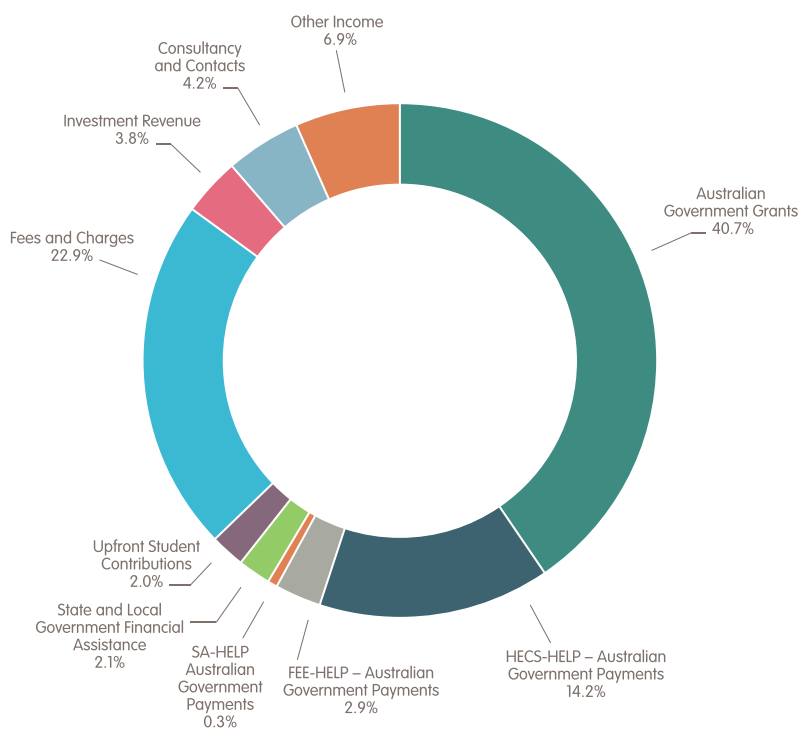


Figure 2. Public Spending on Education (2016).
(Source: OECD, 2016)



In absolute terms, university revenue in 2014, amounted to \$25.9 billion. With a public funding commitment to the sector in the vicinity of 60% (Figure 3).³⁶

Figure 3. Summary of 2014 Higher Education Provider Operating Revenue, by Source.
(Source: Department of Education and Training, 2015)

Australian HES produces a level of output that is greater than its inputs, both in terms of export potential and public return on investment and efficiency in the use of resources.



Return on investment is an argument that frequently muddies the waters when arguing for increased public funding; however, a recent OECD study confirmed that Australia is one of five countries where public return on investment outweighs individual returns, and was placed behind only the UK on this metric (Figure 4).³⁷

For the year 2014-15, the Australian Bureau of Statistics valued the international education market at \$1.8 billion, making it Australia's third largest export, with about 50% of international enrolments at higher education institutions (Figure 5).³⁸

More recently, the total figure has been estimated to be closer to \$21 billion, once all the value chain impacts are duly accounted for.³⁹

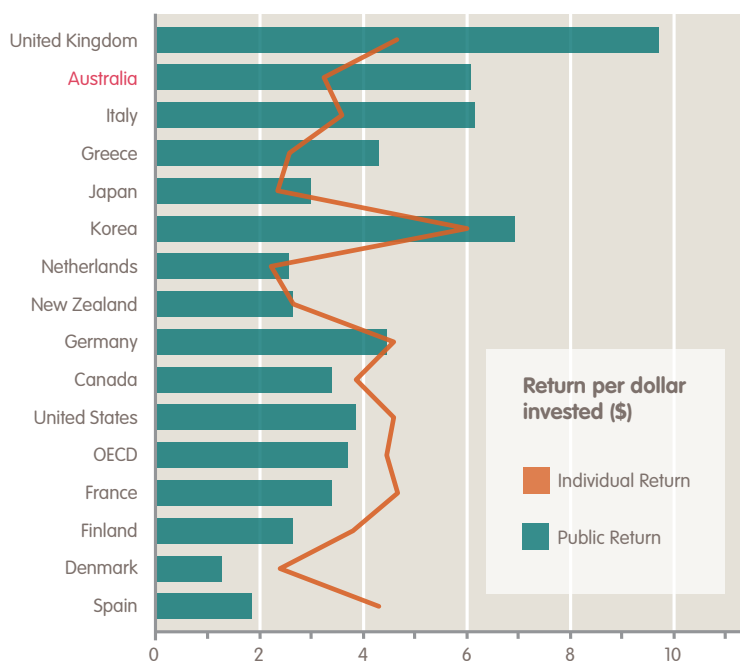


Figure 4. Economic Benefits of Higher Education. Countries Ordered by Ratio of Public to Private Return. (Source: OECD, 2014)

The impact and performance of the HES can be a contentious topic of discussion because of the various methodologies used by several independent bodies that evaluate higher education systems and universities internationally. By looking at such data, however, a view can be formed on the comparative performance of Australian institutions in relation to both local and global counterparts.

The latest publication by Universitas 21, *Ranking of International Higher Education Systems*, evaluates 50 national systems of higher education from all continents on the basis of 25 attributes. Variables are standardised for population size. Countries are ranked overall and in each of four areas: Resources, Environment, Connectivity and Output.⁴⁰

Australia ranked in the top 10 overall and the top 3 for 'Output', which measures research output and impact, student throughput, the national stock of graduates and researchers, the quality of a nation's best universities and employability of graduates. The ranking suggests a level of achievement that is perhaps ahead of what one might expect since support levels underpinning this performance are ranked at 14th, together with Australia's modest funding levels relative to OECD standards. Similarly, the Times Higher Education World University Rankings place 22 Australian universities in the top 400 global institutions⁴¹—a proportion totalling over half of Australia's universities, signalling a sector that is indeed well regarded globally.

While Australia has seen an increase in HES spending over the last ten years, this has in many ways been a remedial move and has brought us back to an average level of OECD investment, in a context of a new age of Science and Innovation;⁴² one wonders about the possibilities brought about by a more progressive funding regime.

Nevertheless, and taking account of current expenditure constraint and commercial realities together with the tendency of governments to take a myopic view of spending for the future, one is reminded of Professor Noonan's closing remarks to his paper on higher education sustainable funding: 'Ultimately the future of the higher education

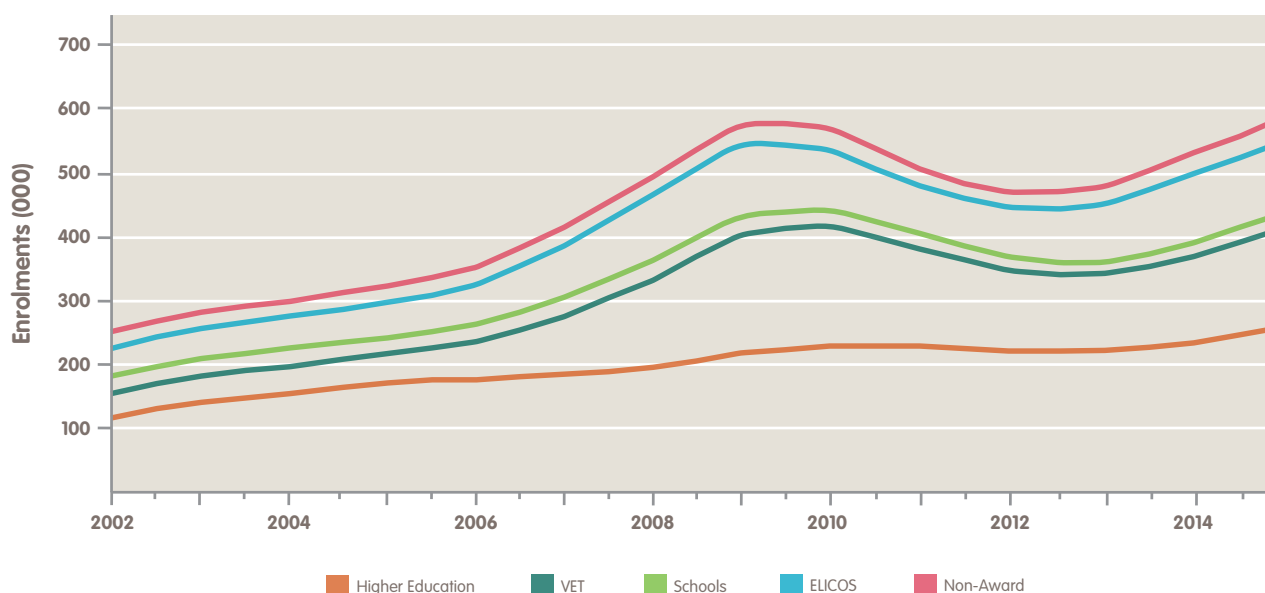


Figure 5. International Student Enrolments over Time 2016.
(Source: Australian Government Productivity Commission, 2016)

From the foregoing discussion, it is not difficult to see why funding models and financial instability appear as a central source of anxiety to most of the participants interviewed for this paper. Based on the facts presented here, it is argued that the Australian HES produces a level of output that is greater than its inputs, both in terms of export potential and public return on investment and efficiency in the use of resources. It is argued that further and ongoing erosion of HES funding, will not only hinder the effective operation of our university system but is also likely to have a significant and adverse flow-on effect on the entire value chain associated with it.

financing reform is in the hands of the HES itself'.⁴³ This paper now turns to several other areas of concern isolated as themes of interest in the HES, some intrinsically related to funding and some that possibly hold the key to alternative funding arrangements, as well as novel strategic directions.

Industrial Reform: Balancing the Great White Elephant in the Room

Every individual interviewed mentioned the need for industrial reform of the sector. Opinions ranged from a firm view that this is an absolute necessity and an impediment to progress across the sector, to the more tempered view that this is an issue that requires addressing among other issues facing the sector; what was consistent was an agreement that industrial reforms are needed. These views are not surprising as labour-related costs remain the largest across Australian institutions, nearing almost 60% of operational expenditure.⁴⁴

There was a prevailing view that enterprise bargaining agreements are a significant source of frustration and concern for vice-chancellors and HRDs in the sector. The agreements were largely seen as being out of step with the realities and demands faced by universities and were often pointed to as an explanation for slow progress in people-related projects and relatively lower ability to change, transform and adapt to market conditions. Despite declining union membership,⁴⁵ interviewed participants largely perceived unions as still wielding significant influence in workforce management across the HES.

The casualisation of the sector has been an issue of concern for some time.⁴⁶ Nevertheless, the casualisation of the sector has continued, some argue with dire actual or potential consequences.⁴⁷ What lies at the heart of this matter, is an issue of flexibility and adaptability. On one hand, union groups would like to protect full-time work and full-time workers; on the other hand, universities have a need to deliver services in an adaptable way within the context of a changing market. Volatility and stability are at odds with each other and there is an inherent industrial tension that is created; however, the taking of dogmatic positions either side has led to somewhat of an impasse for the

"Our industrial relations are very much out of step with the private sector yet more and more we are being required to behave like private entities." HRD

"Our industrial relations situation is the great white elephant in the room. We all know it's there but how do we solve it." HRD

"If universities are to thrive and compete in the market, we simply must modernise our industrial instrument and bring it in line to the realities of 21st century workforce requirements." VC

"Our industrial agreements can be described as the last vestiges of 19th century industrial relations. These agreements are strangling our ability to be agile and compete both locally and on a global scale." VC

"If I wanted my head of HR (human resources) to teach in my postgraduate Masters course, she would need to take leave without pay from her HRD position, sign a casual contract as an academic and teach the class, then return to her substantive position. It becomes rather complex. This at a time when the distinctions between professional and academic staff need to be more fluid and flexible." VC

"We need to move to hybrid positions where the hard line between academic and professional staff is less rigid. We need to see the development of a new breed of university staff member where these roles merge more meaningfully, we need an 'Aca-prof' hybrid position." VC

Without significant workforce management reform, the HES will struggle to deliver 21st century service provision with an outdated ability to make staffing choices and the need to manage more flexibly its largest cost base.



sector. One that will only be resolved with a measure of reasonable dialogue on both parts, as it is in everyone's interest to reach a suitable equilibrium.

It is clear that the demands placed on universities in the future will only increase. Globalisation, digitisation and the changing nature of the needs of students creates a context that calls for an industrial instrument that is modernised, simplified, relevant and fit for purpose; for industrial relations that are based on a shared understanding of the challenges rather than adversarial worldviews; for an industrial system that balances inputs and outputs meaningfully, based on merit and not purely on historic win or loss entitlements; a system that can transparently balance fairness for staff and employees with the right outcomes for stakeholders; and a system that is more acutely sensitive to the changing needs of the sector and able to respond in a dexterous way to the developing and evolving demands it faces.

Whilst one could be criticised for being overly pessimistic, calling for the industrial changes discussed above is more a necessity than wishful thinking. Without significant workforce management reform, the HES will struggle to deliver 21st century service provision with an outdated ability to make staffing choices and the need to manage more flexibly its largest cost base, particularly in the context of reduced government funding and increasing student demands for quality outcomes.

"We need to have the ability to manage our workforce much more flexibly than we currently do. There are rising expectations on universities to do more with less, yet we often need to contend with industrial agreements that are out of step with the modern demands pertaining to fiscal responsibilities, flexible delivery of education and the digitisation of our sector." HRD

"One must remember that in an agreement, it takes two parties to agree. We have somehow agreed to make our EBAs (enterprise bargaining agreements) more and more complex; somehow we have managed to increasingly add things but haven't really ever taken things out of them. A full and frank dialogue is required between the universities, the academics and the unions to realistically deal with this issue, as it is not going away." HRD

"Then there is our bargaining process ... clearly we're doing it wrong." HRD

"The unions are very concerned about the ongoing casualisation of the sector and frankly so are we. Yet due to the very restrictive and expensive provisions in these agreements universities are being forced to employ more casual staff in order to flexibly adapt to the changing demands of the sector. An undesired outcome for all." VC

Innovation, Differentiation and Competition in an Uncertain World

"It's difficult to be innovative when you have 35-plus institutions striving to become full teaching, full research active, carbon copies of each other." VC

"To innovate in the sector, we may need to remove some sacred cows like terms and semesters and we need to revisit the very definition of what is a degree and who is a student." HRD

"If you take a good look at university strategies you'll find they all roughly centre around the same things: a student-centric approach, local community engagement with global reach, development of the international student market, research intensification, quality teaching outcomes. Now, give or take the words entrepreneurship and/or innovation and you have a typical strategy." VC

"The one thing that differentiates a university apart [sic] from other tertiary education providers is the requirement that they be research active. While I don't believe that we have too many universities I do think that we have too many trying to do the same thing. In the future, I think there will be some consolidation in the sector as competition intensifies and we will see universities become more focused and specialised with narrower research profiles." VC

"We tend to differentiate ourselves based on our regional placement, our community engagement and size, rather than on academic offerings or areas of core capability." VC

Participants had an interesting set of perceptions concerning innovation and competition.

Perceptions could be readily separated into two aspects: innovation that could occur inside the university through evolution of coursework and structures, as opposed to innovation that was more external to the university and found in the potential student population and industry partnerships. Many pointed to the paradoxical situation where expectations for innovation and differentiation across the sector are disconnected from a not so innovative reality. Participants often suggested that innovation takes investment, and that in the current pressurised cost saving environment, the time and flexibility required to 'be innovative' may simply not be there.

One participant pointed to the lack of differentiation and strategic insight found in the various strategic plans; his point is indeed valid, as an in-depth look at various current strategic plans across the sector converge in the areas he isolated:

- a student-centric approach
- local community engagement with global reach
- development of the international student market
- research intensification (quality and volume)
- quality teaching outcomes.

University status in Australia is granted by a combination of State and Commonwealth statutes.⁴⁸ The most salient particularity that makes universities



separate from other higher education providers is the requirement set by TEQSA (the regulator) that academics undertake research in addition to teaching, where research is defined as activity 'that leads to the creation of new knowledge and original creative endeavour at least in those broad fields of study in which Masters Degrees (Research) and Doctoral Degrees (Research) are offered'. Whereas an Australian university is required to be engaged in at least three broad fields of study, an Australian university of specialisation is required to 'undertake research that leads to the creation of new knowledge and original creative endeavour extending to only one or two broad fields of study'.⁴⁹

When participants were asked whether we have too many universities in Australia, most answered in the negative but then qualified this with a response outlining the idea that there are too many universities trying to do the same thing, leading to an undifferentiated market. There was a degree of agreement that in the future there would be a tendency for universities to become more focused

"We don't yet fully understand the nature of competition in this sector." HRD

"Digitisation is not the same as putting recorded lectures online. It's much more than that but we still haven't fully discovered it." VC

"Universities still see each other as relatively benign competitors, we share information and resources fairly openly. Anyone can access much of our strategic and operational plans online. That sense of real competition found in the commercial sector still has not reached us." HRD

"Students are no longer grateful and passive recipients of a university education. They are becoming well informed consumers, who are looking for a return on their financial investment and time commitment, they are indeed demanding increased quality and improved outcomes." VC

"We need to be able to see the future and get ready for it. Unfortunately, we get very busy with the day-to-day and innovation doesn't happen unless you make time for it." HRD

"It's expensive to be truly innovative as you need to create a culture of innovation." HRD

"Here we are in a room in the 21st century and we are still heavily reliant on this (the telephone) 19th century technology. Much has changed but much still remains the same, we still have a long way to go." VC

"Our students are looking for a relevant and real-world university experience, one that will prepare them for a future that is more uncertain than ever before, a future where not much can be taken for granted." HRD

"By comparison we have some way to go in being able to establish meaningful and mutually beneficial partnerships across universities and the private sector." VC

and specialised and avail themselves of the provisions under TEQSA to become a university of specialisation, with a narrower research focus and the ability to differentiate more clearly in the marketplace. At present, the University of Divinity is the only Australian university of specialisation.⁵⁰

The future is likely to bring more competition to the sector, with non-university providers accessing university status by satisfying the specialist research requirement in a single broad area of research. Indeed, this subsector is likely to grow from having currently broader-based Australian universities to concentrating efforts on narrower fields of study. Specialisation is a model that we have not yet seen as a mainstream option in Australia; however, it has been widely successful elsewhere, for example with the London School of Economics, a landmark top performer and arguably the leading specialised university globally.⁵¹

The Emerging Role of Universities: Complex Cognition and Doing the Ungoogleable

Participants were vocal about the need to adapt to the evolving role of universities in modern society as a nexus of research and practice in the context of community engagement and value provision, together with the challenge to develop strong ties to the business sector in a partnered approach to growth. The main theme arising regarding the unique value proposition of universities in the future centred on the opposite of artificial intelligence and automation.

Indeed, things like data collection, analysis, synthesis, communication, interpersonal relations and social understanding will become critical in an age where most lower level cognitive tasks are removed from our day-to-day work by the advent of clever software. The coming era is one where information is even more freely available at an even faster pace, where educational content loses its importance as it becomes increasingly commoditised and ubiquitous, and where the human activities that cannot be automated will become immensely valuable. This era of complex cognition, and deep and un-programmable thinking that cannot be

Things like data collection, analysis, synthesis, communication, interpersonal relations and social understanding will become critical in an age where most lower level cognitive tasks are removed from our day-to-day work by the advent of clever software.



imitated by machines, is likely to have a significant impact not only on the way universities manage teaching and learning but also in what areas they choose to research. While there will always be a balance and tension between theory and practice, the theory aspect is likely to become more accessible, creating an imbalance and higher demand for the practice aspect. Universities will be best placed to make knowledge practical and useful, to operationalise theory and help students apply concepts.

The notion that we are preparing students for an uncertain world has never been more true. Indeed, the age of training for a single career or a single job has passed. Multiple and varied careers are now part and parcel of the reality of work; whilst the job for life is no longer an expectation, or perhaps even a desire for most. The further we move from the industrial age to the digital age, the more varied and different the working arrangements will become. Further, the nature of work itself will evolve. Universities are acutely aware of this transition and are challenged by the prospect of evolving their value proposition in a manner that keeps up with the pace of change.

"Universities need to focus on developing core skills, cognitive skills, deep-thinking data analysis, the ability to communicate across topics." VC

"We are best placed to enable our students to think. The future is no longer so much about learning from the past but about seeing the future before it happens." VC

"If it can be done by a computer, it will be accessible and cheap, if it can't then it will be most valuable." VC

"There is only so much that clever software and 'robots' will be able to do." HRD

"We need to focus on teaching our students to do what Google can't do; complex analysis of information, soft skills, communication, building relationships, relating to people." VC

"Once upon a time, universities were in the business of creating and curating knowledge. Much of the new knowledge nowadays is not created in universities but in the private sector and Google does the curating. We need to move to the space of making knowledge useful." VC

"We need to acknowledge the fact that we are not preparing our students for a single career but rather we prepare them for a number of careers. We are preparing them to live and work in a world vastly different from today, where they will depend on technologies that have not yet been invented, for jobs that do not yet exist." VC

This era of complex cognition, and deep and un-programmable thinking that cannot be imitated by machines, is likely to have significant impact not only on the way universities manage teaching and learning but also in what areas they choose to research.



Leading Academics or Academic Leaders

There was agreement across the sample that academic leadership can be seen as both a challenge and an opportunity. Many pointed to the limited exposure to soft skills and people management afforded to most academics in their formational years. Others contrasted the successful characteristics of a leader with those of a leading academic, with the suggestion that many of the core characteristics of each may be incompatible with the other, such as a technically narrow and specialised 'single-minded' focus versus a wider whole-of-organisation and people focus.

Participants spoke about the reticence of some academics to lead or be part of the leadership, and the fact that there may be a cringe factor still occurring in relation to becoming 'an administrator'. Indeed, the concept of intellectual independence is one that was often discussed, with many academics identifying themselves as working "at a university" and not "for a university." The inherent need for intellectual independence was often pointed to as a source of individualistic motivation that at times was not in the collective or collegial interest.

"PhD training and academic life in general don't tend to be the best foundations for a career in administration and people leadership." VC

"The things that make you a great academic are not, by and large, the things that make you a great leader." HRD

"As a sector we have not got our core leadership capabilities clear and therefore our development processes tend to be hit and miss. Also, training academics is not an easy task." HRD

"Leadership and administration are not one and the same." VC

"Leadership is and will continue to be one of our biggest challenges." VC

"Many don't want to become 'administrators'; for many it's not seen as a desirable path." HRD

"We need to ensure that we carve out university leadership as a desirable career path for academics, many continue to see this as a poor utilisation of their skills and an erosion of their intellectual independence." VC

"Only academics work at the university and not for the university. Intellectual independence sometimes gets in the way of forming a compelling view of the collective good." HRD

"Not that long ago we would rotate the head of department role; this meant everyone got to be the boss for a period of time, and of course not many were held accountable. We still somewhat suffer from that mentality." HRD

"It is our ability to lead the transformation required across the sector that concerns me, leadership is probably our Achilles heel." HRD

"We need to develop our academic leadership capability across the board." VC

On the issue of career pathing and professional development, it was clear that there seems to be some reticence from certain areas of the academy to pursue a career in a leadership post. "Administration" work seems to be regarded as less valuable than teaching or research. The support mechanism and development structures that would develop leadership capability tend to be managed at a university level so that each university is developing its own framework and process. It would appear there is a need to consolidate some of this work into a sector-wide initiative that could develop consistent management and leadership capability frameworks, models and development processes, which could be rolled out on a national scale.

Many academics identifying themselves as working "at a university" and not "for a university."



Unlocking the power of innovation across the sector, beyond the cliché of the word, will amount to a significant shift in performance.



A View from the Top

THE FORCES AT PLAY IN THE HIGHER EDUCATION SECTOR

From the foregoing discussion, it is argued that the Australian university education sector is largely under pressure from several points (Figure 6). Firstly, it is pressured by stagnating and potentially decreasing public funding, constantly requiring the sector to do more with less, while expecting increasing outputs from decreasing inputs. Student demands for return on investment are increasing, with students no longer seeing themselves as grateful and passive recipients of a university education, indeed, students want more from their universities, and their expectations for both quality education and employment outcomes are increasing.

At the same time, student numbers are increasing in real terms, further adding to the pressure on our universities to deliver successful outcomes.

On the other hand, universities have a largely complex and restrictive industrial instrument that does not allow for flexible management of their largest cost base: the workforce. Universities face increasing pressure from unions to maintain entitlements, salary increases, redundancy and other benefits that are largely out of step with the private sector and that are not sustainable into the future.

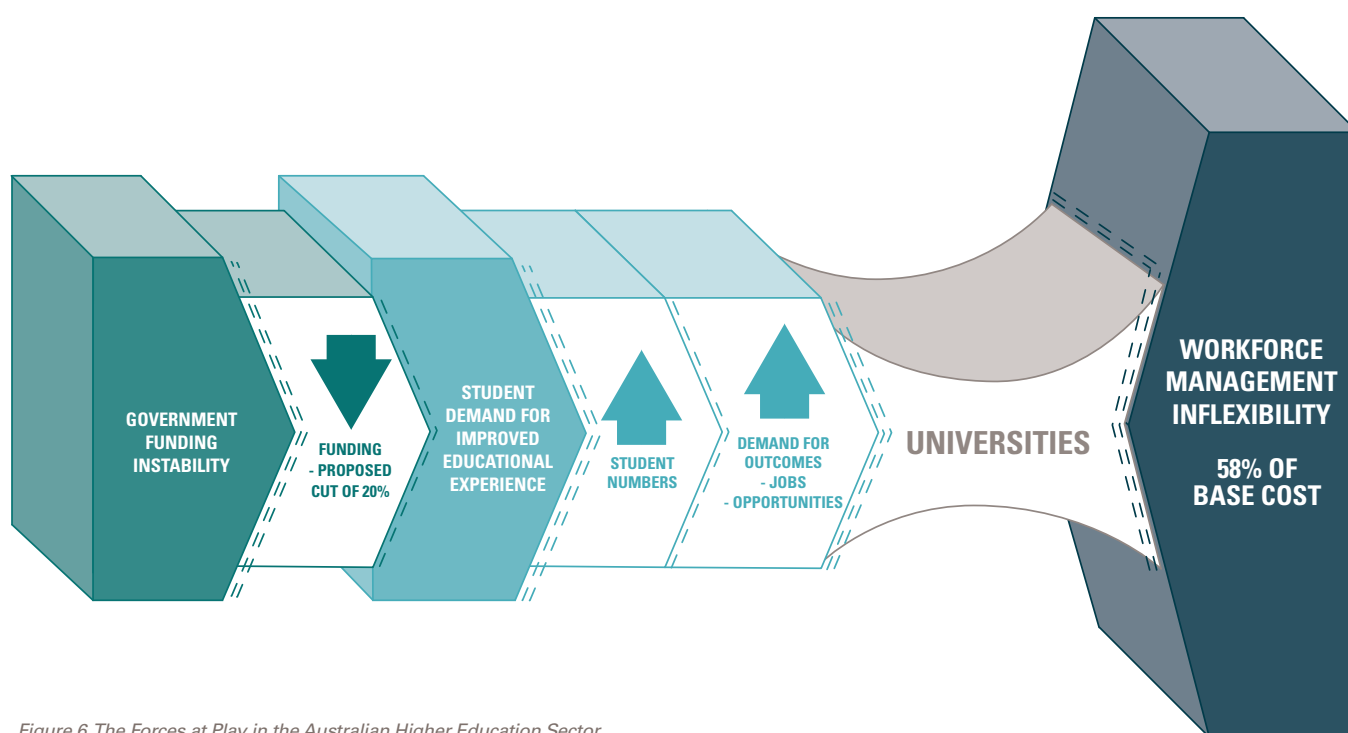


Figure 6. The Forces at Play in the Australian Higher Education Sector.

Furthermore, universities are continually attempting to add value to the communities they serve by engaging with them and promoting synergy across areas of endeavour from a cultural and social enrichment viewpoint. At the same time, they are actively building meaningful commercial partnerships with the private sector that are aimed at finding applications to their research product and new income streams to further fund research and other activities. It is argued that the HES is still producing outputs above its inputs and that it will not be able to maintain this level of performance sustainably. By the accounts discussed in this paper, many of the vice-chancellors and HRDs of Australian universities express concern at the seeming fragility of the sector, with the forces at play.

Some of the possible enablers that are likely to assist in maintaining and promoting growth within the sector are the development of fit-for-purpose leaders who can manage and traverse the complexities of the forces at play. This requires well-developed capability in soft people skills with co-occurring commercial acumen and technical skills. Unlocking the power of innovation across the sector, beyond the cliché of the word, will amount to a significant shift in performance. Those able to innovate by adapting themselves to the ever-changing landscape will be best placed to remain in the field, while we may see the need for consolidation in some of those institutions less open to true innovation and operational agility.

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Dr. John Howard

Dr John Howard is an expert in innovation policy and a highly experienced management consultant and economist with a track record of achievement in the areas of government policy analysis, management strategic planning, research commercialisation and university engagement with industry.

John's professional knowledge, skills and experience in the fields of management consultancy and public policy analysis contribute to a unique capability that has been applied in an extensive portfolio of successful commissions and assignments for government, business, universities and the non-government sector over a 25-year period.

John has a strong interest in digital transformation in organisations and its potential for productivity improvement and for product, process and business model innovation, as well as for employment, training and skill requirements. He holds a PhD in Innovation (University of Sydney), a Master of Arts in Public Policy (University of Canberra), and an undergraduate degree in Economics (Honours) from the University of Tasmania.

Community Impact and External Partnerships: From Transactions to Partnerships in Innovation Systems

Cooperation and collaboration between universities, business, government and the community is a major plank in innovation systems thinking. There is an expectation that stronger interactions and relationships will lead to improved productivity, performance and competitiveness at the firm, regional and national levels.

There is a vast difference between the way innovation systems are described in terms of knowledge flows, and the way they operate in formal and even semi-formal ways. The working of innovation systems relies to a large degree on initial personal contacts and networks and their subsequent formalisation through a hierarchy of understandings and agreements - starting from informal assistance and advice, transactional contracts for commissioned research and consultancy, through to more formalised memoranda of understanding, affiliation agreements and partnerships, and finally, to binding joint ventures and incorporated entities.

This movement from transactions to partnerships requires the development and application of skills and systems for client relationship management and capacity for the negotiation and execution of what are effectively 'instruments for engagement' that involve senior executive level input from all parties. This input not only addresses issues relating to teaching and research outcomes, but also matters concerning commitment, cost and risk.



Converging or Diverging Missions

The building of stronger relationships between business and universities must accommodate and respect the differing missions of universities and business. Some have argued that missions are ‘converging’ as universities become more entrepreneurial, while others see universities as committed to strengthening their core capabilities in teaching and research.

Universities are institutions for learning and for the creation of new knowledge. Income is generated through fees paid by students (or by governments on their behalf), research grants, government grants for specific purposes and endowments. The sources of income are becoming widely influenced by the institution's level of success, often judged by the eminence of faculty and the reputation of the institution—now reflected in international rankings. This is shown to be the case with Australia's top six universities (recently named by the Times Higher Education World University Rankings) also being some of the top earners in the sector (estimated \$1.1 to \$1.9 billion worth, as of 2013).⁵²

Businesses exist for the purpose of serving customers and income is generated by sales of goods and services that meet customer needs and satisfaction.

Success is measured by profit, return on investment, market share and ethical behaviour. Consequently, innovation and marketing are fundamental business activities. The tertiary sector is therefore adopting marketing methods as a way of increasing student numbers and generating research and commercial income, while many businesses have been positioning themselves as knowledge organisations.

Universities are seen by businesses as important ‘suppliers’ of knowledge in their innovation strategies. Knowledge is supplied in the form of research outcomes, educated graduates, access to knowledge facilities and resources, and the provision of a physical and intellectual space for discourse in science, technology and the arts. Thus, a university is both a ‘knowledge factory’ and a pillar for a civil society. A university can, and quite often does, provide leadership in regional, cultural, and community development, particularly in a contemporary context of regional innovation ecosystems.

Businesses want knowledge to merchandise more products and services, enhance productivity, improve competitiveness and, generally, to meet customer needs and expectations. Their main area of demand for knowledge

is educated graduates who are competent in a field of study and have well-developed problem-solving skills in a professional area. In the current climate, businesses expect universities to produce more graduates to fill workforce needs—they want students to be ‘work-ready’.

Businesses still look to the Vocational Education and Training (VET) sector for people with technical skills, and are concerned with State Government policies that are de-funding their TAFE sectors, with

35,000
fewer students
undertaking study/trade
apprenticeships.⁵³

TAFE has traditionally been a ‘business facing’ institution, however a university qualification is regarded as more prestigious than a VET qualification and ‘the value of vocation study has been eroded’ (Vicky Thompson, Chief Executive - Group of Eight). While in Europe, academic and technical qualifications both remain highly regarded.



Businesses like to have access to the outcomes of research—but research that is directed towards meeting their business needs and requirements. Most are prepared to pay for this research under various ‘engagement’ arrangements, although there are some who think they have already paid for it through taxpayer-funded grants. Businesses tend to trust universities as being objective, but are often concerned about time frames and researcher commitment. Universities would like research for business to have a new knowledge outcome that can be published in an international peer-reviewed journal. More often than not, both outcomes can be achieved.

Governments also want to recruit educated and competent graduates to work in policy development and implementation. They require recruits to have disciplinary knowledge, problem-solving and communication skills, and to be ‘work-ready’ for preparing an evidence base for new policy and policy

change. This is particularly important for government agencies that have cut their in-house training budgets and limited their employment of professionals.

Governments are increasingly expecting universities to supply not only the knowledge for their workplaces in areas such as education and health, but also the training that is required for its translation and application into practice. Government agencies have cut back substantially on clinical placements and education practicums and are, at the same time, requesting universities to pay the cost. Universities have responded by running their own clinics for student internships. Work integrated learning programs can reduce the cost of training for businesses.

Governments also want universities to transfer knowledge to businesses, particularly innovative and entrepreneurial businesses, as these are seen to be the major drivers of competitiveness and employment growth. This has been seen more recently by the announcement of

Universities are also businesses, established by statute as public organisations. They must be financially viable and sustainable, at least break even, and preferably report a bottom line surplus.



the *National Science and Innovation Agenda* by the Turnbull government.

Under the agenda, the government intends to spend \$1 billion on university–industry research and development next year, when compared with the previous financial year. It is commonplace to think that knowledge is transferred through transactional processes such as ‘commercialisation’, and governments have exhorted universities to increase their commitments in this area.

It is now being recognised that knowledge is increasingly being transferred by students setting up new business ventures and start-ups and universities are making major commitments in this area, often in collaboration with the business sector. Universities such as Macquarie and Sydney University, are launching on-campus ‘innovation hubs’ to foster entrepreneurship among students, academics and the industries.⁵⁴

⁵⁵ Commonwealth, State/Territory and Local Governments also have programs to

assist in scaling up activity in this area.

Universities are also businesses, established by statute as public organisations. They must be financially viable and sustainable, at least break even, and preferably report a bottom line surplus. Income is generated primarily from students and research activity. Universities are also ‘not-for-profit’ organisations, and sometimes want to be seen as charitable organisations for the purposes of attracting gifts, bequests and endowments. Some universities have become quite successful in this area, attracting \$540 million in donations in 2015, a 25% increase from 2014.⁵⁶

It is against this background that universities, business and government must strengthen the ‘institutions for engagement’ to secure a greater flow for knowledge into application and use in industry and societal contexts.

Building University-Business Engagement

It is possible to think of university–business relationships in terms of a hierarchy of ‘instruments for engagement’, starting from the informal and casual to the formal and highly structured. These instruments will include:

- **Personal relationships**—people from academia and industry mix and interact through professional associations, conferences and community organisations. Regional innovation networks are emerging across metropolitan areas and in regional locations.
- **Memoranda of understanding**—simple, non-binding, agreements that provide a framework for collaboration and ongoing interactions. Stronger engagement may actually start with a formal event for signing.
- **Purchase contracts for services**—business-engaging through procurement strategies for specific teaching and research services. These may be secured through competitive tender and might be established on an ongoing basis.



■ **Licensing agreements**—arrangements to use intellectual property in business contexts. Licensing generally calls for strong supporting relationships regarding the application and use of the technology.

■ **Affiliation agreements**—documented agreements to collaborate in pursuing common goals and objectives. Businesses may want to establish

■ **Incorporated entities**—formally constituted legal entities involving a commitment to collaborate in undertaking teaching and research over an extended period. These may be sought when an entity will be engaged in trading and/or where a university is only seeking a minor (no-controlling) interest.

In addition, most universities have policies and strategies for adjunct and honorary appointments for people with

Most universities have policies and strategies for adjunct and honorary appointments for people with industry knowledge and experience who are willing to contribute to teaching and research.



and leverage a formal affiliation with a university, such as the appointment of a sponsored chair or named building rights.

■ **Joint venture agreements**—contracts to work towards a specific goal or objective, covered by an executable deed.

This can cover initiatives around property development, including science and technology precincts, innovation centres and student accommodation.

■ **Partnership agreements**—formal negotiated agreements to work in partnership to achieve a specific outcome over an extended period. These may relate to multi-million dollar research collaboration through centres for teaching and research.

industry knowledge and experience who are willing to contribute to teaching and research. Appointees may not meet strict academic merit criteria but they provide an important way of building collaborations. Honorary and visiting appointments are well established in clinical teaching and research.

Businesses often seek the appointment of senior academic and executive staff to their boards as non-executive directors to take a specific interest in innovation. University councils may be concerned about potential conflicts of interest, although the benefits for both business and a university should outweigh any of these risks.



Building Capacity for Engagement

Relationships work best between organisations when trust and confidence are established at the governance and executive level. They do not work well when the approach is built around transactions—people shopping around to buy knowledge products as in a supermarket, and suppliers trying to sell knowledge products on the basis of their own conviction of intrinsic value.

Building and sustaining business–university relationships requires a specialised skill and capability, with intermediaries and brokers possessing knowledge of missions and values of both sets of institutions. In recent years, universities have made appointments at a senior executive level for people to build engagement

with industry. These roles extend beyond technology transfer and the search for research income and well into confidence building with a university focused on the importance of strong long-term relationships.

Engagement also means working with business and business organisations to create awareness of how universities operate, and to build confidence about the prospects of working with a university as an organisation, rather than individual academics.

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Dr. Onnida Thongpravati

Dr Onnida Thongpravati is a postdoctoral researcher in entrepreneurship and innovation at the Australian Research Council (ARC) Training Centre in Biodevices and the Centre for Transformative Innovation, Swinburne University of Technology. Her areas of research focus on new product development (NPD) strategies and management as well as entrepreneurship, particularly the front end of the NPD process and 'true to type' breakthrough products.

In the educational and training aspects of entrepreneurship and innovation, her research expands into entrepreneurship education and training and cross-disciplinary STEM (Science, Technology, Engineering and Mathematics). She has authored in a range of journal and conference publications along with book chapters (Pearson publishing) including International Journal of Engineering Education, International Journal of Organizational Innovation, Innovation and Product Development Management Conference, Australian & New Zealand Marketing Academy, Innovation and Entrepreneurship in STEM Education Conference, Quality in Postgraduate Research, and International Society for the Scholarship of Teaching and Learning.

Onnida has been invited as a guest lecturer/tutor and speaker at universities and organisations both in Australia

and Thailand. She previously worked as a project manager/consultant for companies across industries in Thailand, and as a procurement and logistics planner at a global ICT supply chain distributor in Australia. Onnida holds a Bachelor of Business in E-commerce (Swinburne University of Technology), Master of Business and Information Technology (University of Melbourne) and a PhD in New Product Development and Innovation (RMIT University). She has won several awards and scholarships; for instance, the TOP 15 of the 2015 International Society for Professional Innovation Management (ISPIM) PhD Dissertation Award, the 2013 Best Reviewer Award in the Markets and Innovation track at the University of Auckland and the Australian Postgraduate Award from the Commonwealth of Australia.

The Student of the Future

'During the next 50 years, innovation and skills development, driving economic growth through productivity, will be the major counterbalance to ageing populations, climate change and rising income inequality.'⁵⁷

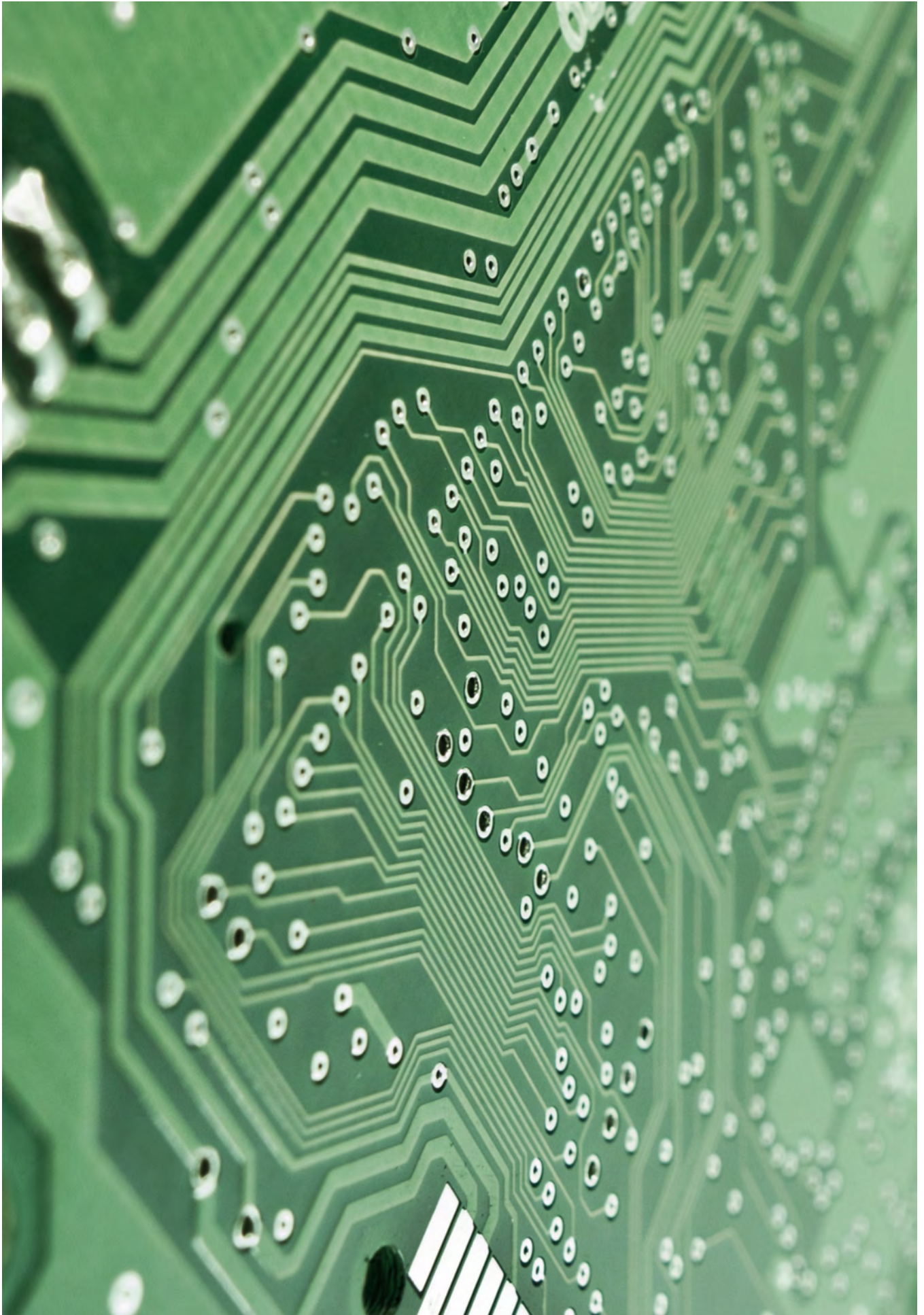
In today's highly dynamic and rapidly changing technological world, the shift from an industrial-based economy to a knowledge-based economy and increased globalisation, and the future of a country and a nation's competitiveness, productivity and innovation performance lies with its people, or human capital. Accordingly, it is important that these human resources (HR) have the ability to learn and cultivate a range of skills, and to be entrepreneurial and innovative to develop something new from their own local resources and capabilities that will create real positive impacts to broaden communities, shape wellbeing, improve living, and transform markets

and industries. The development of human capital highlights a critical role that universities play in practically and theoretically educating and facilitating the optimal life-long learning, knowledge and experiences of students who will be the workforce of the future.

But what types of students do we have in this 21st century and what are their evolving, unarticulated or latent needs? Are we still educating them the same way we have been through the 'traditional' pedagogy and educational practice from centuries ago? How can we develop the best and the brightest, the next generation of future leaders across industries? To what extent should we listen to students' current needs and demands? How can we innovate and deliver the best possible education and training for students becoming entrepreneurs or going into the workforce (for jobs that might not exist today)?

And how flexible does the learning and teaching need to be in contemporary tertiary environments, what are we missing given modern and innovative digital technologies and breakthroughs, and how far do we need to go to develop the University for the Future for the Student of the Future?

This chapter reviews pertinent issues of Australia's innovation performance and the education system at the tertiary level, particularly in the field of entrepreneurship and innovation, and presents a fresh perspective in attempting to answer these questions. It also considers the needs and skill sets required by students in the future, and the directions that universities could take in developing innovative education and training programs to support tomorrow's students.





Australia's Innovation Performance

The 2014 *Australian Innovation System Report* from the Office of the Chief Economist stated that:

'Innovation is a tool for creating and capturing value for a business and its customers, translating into increased productivity and profitability. This gives businesses a competitive advantage in the market that, when aggregated, drives sectoral and national competitiveness, and the productive re-allocation of resources throughout the economy'⁵⁸

Despite the importance of innovation to a country's success, Australia has been shown to have a lack of capacity to commercialise research by means of transforming discoveries or findings into practical and commercially viable outcomes (i.e., new products or services to benefit the community). According to the 2012 *INSEAD Global Innovation Index*, Australia was ranked 13th on the calibre of its innovation input and 31st on innovation output, while the innovation efficiency ratio of output over input placed the country at 107 out of 141 countries assessed.⁵⁹

Moreover, the Organisation for Economic Cooperation and Development (OECD) ranked Australia in 2012 as 20th out of 26 countries in terms of patents per capita, which accounted for less than 0.8% of the world's patents.⁶⁰ Patents provide exclusive rights to an inventor of a marketed product or service and are one of the key measures for successful commercialisation and innovative performance. They have been used to measure a country's capacity or willingness to exploit knowledge into innovation.^{61 62} In terms of patent applications, the number of Patent Cooperation Treaty applications (being one international patent that protects an invention throughout 148 countries in the world) and triadic patent families filed by an Australian inventor has also dropped steadily, by 22% from a peak in 2005 and 45% from a peak in 2000, respectively, according to the 2014 *Benchmarking Australian Science, Technology, Engineering and Mathematics Report*. This suggests that thousands of potentially great inventions are not capitalised on each year.⁶³

In addition, the predominant innovation developed by Australian firms of all sizes is the adoption and improvement of existing innovations or incremental ones, as opposed to new-to-market or new-to-world innovations. The Australian level of new-to-market innovation has declined since the early 2000s, and this can affect a firm's competitive advantage and the country's international competitiveness and participation in global value chains. With only

5.7%
of Australian businesses
introducing new-to-market
innovation in 2012-2013,

Australia is now behind other European Union countries like Germany (17%) and Sweden (26%).⁶⁴

Although some initiatives, such as the newly introduced R&D tax credit incentive, the Cooperative Research Centres (CRC) program and the ARC exist and have contributed to development of innovations, Australia's investment in commercialisation programs is limited and inadequate to address the 'valley of death' in a significant way—for instance, by a lack of funding or informed investment in critical proof-of-concept tests during the early stages of the development process and into commercial application.⁶⁵ Australia's public research funding also appears to favour 'safe' and incremental projects that build on current knowledge, rather than a more novel and innovative project.⁶⁶ This is one of the underlying reasons for Australia's underperformance in patent intensity; hence, the ability to attract venture capital investment is not optimally constituted and managed.⁶⁷

A lack of skilled personnel was found to be one of the biggest barriers to innovation for innovation-active businesses.



Further networking and collaborative innovation, including the capacity to acquire and exploit external knowledge, are vital to any innovation system, especially for the health and medical research sector. Nonetheless, Australia has one of the lowest levels of collaboration between research and industry compared with other OECD countries.⁶⁸ This contributes to the failure of commercialisation during product development because relevant commercialisation expertise arms in universities, industries, medical research institutes and hospitals are typically fragmented. As a result, Australian researchers have insufficient access to the commercialisation expertise and often are without first-hand experience of working in successful and innovative firms.^{69 70}

Australia's innovation inefficiency can undermine the nation's return on investment in research, the profits from the sale of products, and the attractiveness of private and foreign investment in product development.⁷¹ In the most recent 2011 survey of 'barriers to innovation' conducted by the Australian Bureau of Statistics, a lack of

skilled personnel was found to be one of the biggest barriers to innovation for innovation-active businesses. There is a significant shortage of the necessary specialist capabilities, experience and resources that are needed to bring high-impact research, and new ideas or inventions to the markets, beginning from project identification, development, management of intellectual property and investment proposals, and engagement with potential investors and commercial sponsors.⁷² The Australian Institute of Management's 2012 *Australian Management Capability Index* supports this contention that Australia's record in people-management and 'instilling a talent mindset' is falling behind world best practice. It is now a national priority to make all this happen and, in essence, it is a challenge to Australian academic programs to respond to this barrier—to develop graduates who are passionate and innovative about developing and commercialising something new that will make a difference in people's lives locally in Australia and also more broadly in other countries and locations.



The Tertiary Education System and the Needs of Tomorrow's Students

The role that universities play in contributing to a country's national innovation system has been widely recognised in the literature.⁷³ This has taken in the form of education and the training of personnel who can provide the critical skills necessary to meet the needs of the industry, the university, and the National Innovation and Science Agenda—for instance, by engaging in technology transfer of research work and/or assisting new technology-based firms in R&D.⁷⁴

Today, a new generation of students has a strong interest in becoming 'an innovator and/or an entrepreneur' and is keen to interact and connect with major businesses to grow and develop the skills required to underpin that success.⁷⁵ Students are eager to be inspired and awed, and want to make an impact on the world and strive for a

brighter future. Therefore, there is an increased need for entrepreneurship and innovation education and training, and an increased demand for courses with a pedagogical approach relevant to all students across disciplines.⁷⁶ Entrepreneurship and innovation education is seen as a tool to equip all people and organisations in society with entrepreneurial competencies.⁷⁷ This can contribute to the development of social entrepreneurs and business start-ups; moreover, entrepreneurship education acts as an enabler that enhances the employability of young people in both public and private sectors. As a consequence, educators have an essential role in influencing the success of learners.⁷⁸

The support for entrepreneurship and innovation has spurred much enthusiasm and so does the role of infusing entrepreneurship into

education at the university level.^{79 80} Entrepreneurship education focuses on providing skills, knowledge and motivation required to engage in entrepreneurial and innovative activities and start a new business with success. Entrepreneurship education in universities has a positive influence on entrepreneurial dynamism, and is viewed as a prime engine of economic growth, job creation and innovation performance, as well as increased societal resilience and individual growth.^{81 82 83 84 85} The 2010 OECD's global report on small and medium-sized enterprises (SMEs), entrepreneurship and innovation highlights the need for universities to increase their focus on entrepreneurship education and small business programs—these have a critical role in improving overall SME and entrepreneurial activity at the national level.



In fact, Australia is the location of 20 universities that are in the world's top 400 universities, and there has been an increased interest shown in entrepreneurship and innovation education as a subject of study and courses by a majority of universities.^{86 87} In 2014, entrepreneurship and small business management courses were offered across 39 Australian universities—many of which have their own business schools. At the undergraduate level, approximately 95% of the Australian universities offer entrepreneurship or small business units and 18% have full entrepreneurship courses. At the postgraduate level, about 90% offer units and 33% offer specific courses

in entrepreneurship or innovation such as Graduate Certificates, Graduate Diploma courses and Master's degrees. This indicates that the majority of Australian universities are interested in entrepreneurship research.⁸⁸

Although there is a debate about whether entrepreneurship should (and can) be taught and learned at universities, Drucker (1993) stated that 'everyone who can face up to decision-making can learn to be an entrepreneur and to behave entrepreneurially' and that entrepreneurship is a 'behaviour rather than personality trait'. Thus, entrepreneurship can be taught and encouraged through proper education and training.^{89 90 91} In fact,

entrepreneurship education has grown to play a fundamental role in the industrial and educational policy of several countries throughout the world.⁹²

There remain some issues over how entrepreneurship and innovation should be taught, what should be taught and by whom. Most Australian universities lean towards the traditional approach where entrepreneurship and innovation skills are developed and facilitated by business schools (and only within the business schools), and have limited industry outreach programs and applied research or support programs that make a difference in learning outcomes.^{93 94}





Several university graduates and researchers in Australia, particularly those in science and engineering, have limited skills and knowledge related to the commercialisation process because they have only a few contacts, or none, with the commercial world. The cultures of the academic and commercial sectors are often kept separate, limiting the chance to develop professional linkages.

To increase entrepreneurial and innovation capability across the sectors, the development of relevant skills and knowledge, attitude, and sets of attributes and behaviours must be promoted through government policies and cultivated through education and training. The importance of management capability and skills in Australia was highlighted in the *Enterprising Nation* report (the Karpin Report) in 1995: 'better educated and trained managers will secure significant economic benefit through work place restructuring, improved business processes and increases in the productivity of Australia's human and capital resource'.⁹⁵ This is particularly true in the current knowledge-based economy with the advent of information technologies where highly skilled labour is considered to be a significant contributor in gaining productivity through innovation. Innovation success requires not only the 'hard' technical skills that are discipline-specific and traditionally conveyed through formal education, but also practical 'boundary crossing' and personal 'soft' and transferrable skills that are critical to students of the future.

The emphasis on enhancing employability does not simply mean equipping students with what the current labour market wants, since more than 80% of current jobs could possibly be gone within the next decade. There is also likely to be more mental labour requiring intellectual agility than physical labour.

In my view, the *critical 'must-have' skills of the future* include but are not limited to:

- 1. STEM skills:** The development of radical and new innovations requires specific technical mastery and training in complex areas. STEM-based skills and digital capabilities allow students to capture new thinking strategies necessary for the design and development of new technologies and inventions.
- 2. Entrepreneurial skills:** Entrepreneurial individuals have the mindset and vision to drive the development of innovations, particularly breakthrough market-driven innovations, while non-entrepreneurial individuals might not be able to foresee future potential opportunities and might find it stressful to adapt to changing circumstances. Entrepreneurs also have the ability to take risks and the initiative to start a new business, either as a 'start-up' company to become their own bosses or as a 'spin off' or new venture in an established organisation with a view to develop something without being constricted by concrete rules.

3. Effective communication skills:

These traditional 'back to basic' skills are reading, writing, speaking, storytelling and presentation. Nowadays, students are 'growing up digital' and often have spent more time playing video games, posting on Facebook, tweeting, and sending and receiving emails or instant messages than reading books and journals. The advanced technologies and the Internet, however, do not make reading or writing any less important. On the contrary, these skills become more important because our leaders, experts and innovators regularly use the Internet as channels of communication to disseminate new ideas and solutions. The students of the future will therefore need to actively engage in the web space in order to learn, cooperate and contribute to the ideas through writing. In particular, if they are inventing something radically new, they need to be able to communicate and convey their unique experiences, collaborate and inspire others to get on board with their inventions. Whether they are speaking in public and/or using print, advertising or digital media, writing will help them to curate ideas, engage in good 'story telling' and clearly establish their 'personal brands' with confidence. Writing

means re-writing, that is, a patient process of selecting the words and tones with care and ensuring that the meanings are direct, polished and appealing. This also applies to writing cover letters, clever captions, tweets and hashtags, where there are more venues for posts and publications; for example, LinkedIn, The Conversation and Twitter.

4. Critical thinking and problem-

solving: Noting the importance of digital and technological devices in our daily use, we must remember that technology acts only as an enabler and not as a driver of our learning. There is much that is unknown about spending too much time web surfing or staring at screens, especially regarding the constant use of mobile phones; these activities may hamper our deep thinking and mental connections, short-term concentration and memory. If we feel we can Google something at any time or that everything is available on our devices, we become less likely to learn and/or remember anything. In a world of ever more input and instant feedback, the brain will need to be retrained and rewired to be discerning, thoughtful and reflective so that it can critically analyse large amounts of data and information

that would be beneficial for finding the right solutions or new ways to solve problems. Such writing can help to shape our brains in positive ways, by means of crafting and imparting the abilities to think deliberately and rationally, evaluate, interpret, make decisions and argue.

5. Creative and innovative thinking:

This humanities-based skill is a person's ability to think differently, think 'outside the box', and search for and visualise an answer to a question that nobody else is asking but is worth exploring. Such a skill is particularly critical for breakthrough innovations, in terms of thinking of new ideas or technologies and linking these to future market opportunities to solve hidden or unarticulated needs of customers or end-users.

6. Commercialisation and sales skills:

Having potentially good ideas does not mean anything if they are not translated into improved processes and new products or services in the sense of real and viable businesses. Importantly, the ability to bring those ideas to emerge from the front end of innovation into the development phase and through to launch, and the capacity to sell the ideas, are critical to innovation success.⁹⁶

7. Networking skills and emotional intelligence

(EQ): The always-connected world and increased globalisation highlight the significance of interpersonal skills to build group synergy, teamwork and professional networks, thereby collaborating and exchanging knowledge across industries and disciplines. It must be noted that external knowledge is a key source of creativity and innovation.

In addition, having a high EQ will be more valuable than a high intelligence quotient (or IQ). This relates to the abilities to recognise, control and motivate one's own emotions and signals. In particular, having a positive attitude (self-awareness and regulation) is important, while discerning how other people feel.

As the economy becomes more multicultural, the level of ability to understand, empathise, negotiate and cooperate to 'fit in' with other people is important to success in both life and one's career.



Overall, students of the future must be broadly equipped with multifunctional skills; they must be knowledgeable and have entrepreneurial characteristics with leading qualities to be able to work well in circumstances of high risk and technical uncertainty. Correspondingly, universities need to develop a new education and training framework, and pedagogies of specially designed disciplinary programs that would enable students to solve increasingly complex problems.^{97 98 99}



Innovative Education and Training Programs

Over the past decade, revolutionary innovations such as the Internet, personal and mobile computing, smartphones, tablets, virtual reality, 3D printing and robotics have all taken off to set the current benchmark and the next generation as 'tech-savvy' consumers. Tertiary education has, however, failed to keep pace with the dynamic and technological world and has largely remained static year after year. The Internet and Wi-Fi have apparently become the new library and with 24-hour access to free knowledge at their fingertips; universities can no longer control how information will be diffused and assimilated. There is thus a gap and disconnection between the traditional university system in terms of how we educate and train the young people of today and tomorrow.

The main reason that universities across the globe are trying to move away from traditional models is to produce 'the best and the brightest' by enhancing students' learning experiences, outcomes, job prospects and graduate attributes. Because of competitive intensity and technological market turbulence, the students of tomorrow will probably have different needs, increased expectations and different learning styles compared with the students of today. The cohorts of tomorrow's students are certainly going to require more flexibility and options to address the ever-changing demands of the labour market. If we look back over the past five to ten years, a degree like the Bachelor of Information Technology (Mobile Application) or a job like a social media analyst would not have existed in the market.

The students of tomorrow will decide about the significance of the course, what it means to have a degree or qualification, where and at what point in time they should study, and how they might acquire a range of skills and abilities needed to support their life and career goals. They will search for services in education and training where their curiosity and questions can be satisfied. While being technologically driven, the education settings should be organic, interactive and pragmatic to enable students to naturally grow, be creative, absorb and apply knowledge on their own terms. This emerging demand tends to stimulate universities to look ahead into the future and review their current pedagogies and technologies. In fact, these will have an impact on every aspect of the university from the purpose of qualifications at different levels across disciplines, the design of the components and volume of learning, the recruitment into education and training programs, enrolment, learning spaces and onsite facilities.

The tertiary education sector is increasingly competitive and becoming more transparent and flexible, which leads to more choices regarding how and where to obtain education services. If students and parents are uncertain about the value of a degree and qualification in a specific field or their demands are not being met from certain universities, it is likely that they will go elsewhere to find an educator, or pursue a career instead. Universities that do not take the opportunities to meet the needs of tomorrow's students will therefore face difficulties in recruiting and retaining students and thus may fail.

In a discerning higher education marketplace, we know that it will be difficult to be everything to every student. As more advanced technologies continue to replace physical routine jobs, education and training must be reformed; thus, we need to

reshape our strategies. It is not only a question of how to reinvent or embrace alterations in the current model and education system to prepare our graduates for the future, but also of when this can occur. It might even be easier to establish a whole new university from scratch. This is because the focus is not just on a more job-oriented curriculum that will help students to find a job at the end of their programs; it is also a holistic approach for students to think differently and to differentiate and position themselves in the market to achieve their academic and career goals through professional study, experiment and reflective learning.

Thinking about successful and highly innovative firms, these often take a solid stance to develop something radically new or really new for commercial purposes, and push such new products or services out to the market and educate the consumers or end-users. This type of breakthrough 'market-driven' innovation enables firms to revolutionise an industry and fundamentally reshape the market structure, the preferences and even the behaviour of all players in the market (i.e., customers, competitors and other stakeholders). Following the traditional market research approach of incorporating direct customer input into the front end of the new product development effort often leads to only small, incremental improvements of existing products or shortsighted product innovation. Often, customers have difficulty visualising and articulating their future needs because their mindsets are based on what they have experienced or their current use context.¹⁰⁰ This is a 'functional fixedness' - a cognitive limitation that may hinder truly creative thinking and can influence the tacit knowledge that underlies intuition or real insight regarding the latent needs of customers.¹⁰¹

In an attempt to prepare for the upcoming student generation and take them to the next level, we may also have to start thinking about 'driving the markets' for the future of the higher education landscape rather than being driven purely by increasingly diverse patterns of provision and the changing demands of the students, recruiters and job markets. Students equipped with only a specific set of skills may find it difficult to adapt to constant change. We should therefore take a radical approach to education and training to counterbalance the future demand for skilled workers and labour markets. Universities must look inwards to their people, processes and technology. To understand and observe the deeper motivations and mindsets of students, how they learn, communicate, and engage with the university and the world around them, universities also need to look beyond the simple attendance of classes by students. Correspondingly, they can develop and improve product offerings (innovative pedagogies, course and unit development) and teaching delivery that would appeal to specific needs and desires. This involves pushing

forward the frontiers of the student experience, post-university success and student understanding to compete in an evolving higher education market. This transformational change must be driven from top management (university leaders) with strategic guidance.

Possible *structures and features of the future innovative education and training programs* could involve:

- **Multidisciplinary and real impact research-and-design-led innovation:** The university of the future must support the generation of students that have a desire to make the lives of people and the world a better place by also supporting research that addresses fundamental questions and translates that into practical or tangible solutions for commercial, economic, social and environmental benefits, such as technological developments and high value-added products and services.
- To foster research capacity, knowledge and scientific discovery across disciplines, more could be done in multidisciplinary
- Additionally, there is scope for state and federal governments to provide funding support for internships, industry-based programs, travel scholarships and fellowships that allow researchers and business leaders, particularly SMEs, to work together and gain valuable research and commercial experience in different settings.¹⁰² This may even find relevance in the context of the CRC program—a Commonwealth Government scheme that provides intensive skills and experiences in working with industry because it tends to favour large, established industry players, whereas many new employment opportunities in the knowledge economy are

research and entrepreneurship, and innovation education through industry outreach programs via industry partnerships or student internships, new venture creation incubators and start-up support centres. These programs can help graduates to engage in new business start-ups or internships that facilitate their employment with the industry in the future.

Students equipped with only a specific set of skills may find it difficult to adapt to constant change.



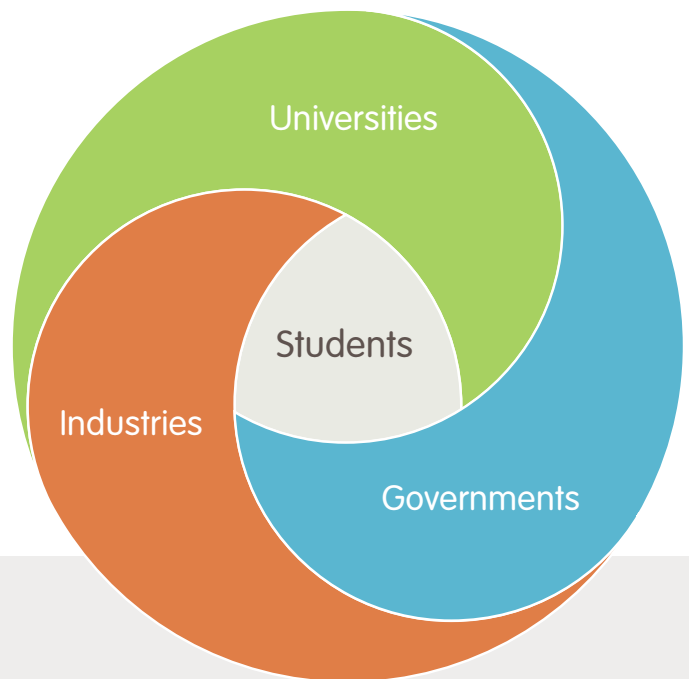


Figure 7. Student-Centric University–Industry–Government Collaboration.

generated by smaller and more nimble firms that target niche markets. In addressing Australia's performance in commercialising research, the head of business development at the Walter and Eliza Hall Institute described the future of the Australian paradox:

'The new generation of researcher expects translation opportunities at a level never before experienced ... The next step is an explicit strategy to change the culture of commercialisation, by integrating government policy and initiatives with Australian research organisations commitment to training, development and innovation.'¹⁰³

■ 'Student-centric' university-industry-government

collaboration: The underlying basis of this model is that the student needs to be at the centre of the universe. It is a learner-centric or student-centred model where teaching, learning, services and capabilities are centred around the student and available as needed—anytime, anywhere, anyhow, through any device.

The future of education will 'open doors' for partnership, collaborative efforts, integrated networks and win-win situations among employers and local or international education providers, involving students, universities, businesses and governments. The model helps to procure potentially great ideas to get across 'the valley of death' through government and university-funded research and industry-led development and commercialisation.

In particular, business and industries will have a greater role in shaping the needs and diverse skills of students, driving education and training standards by aligning accreditation to employer requirements, providing funding and, ultimately, shaping education policy.

An increase in the level of university industry-research collaborations will facilitate the linking of capabilities of advanced information technologies and stimulate networking, communication flow and knowledge sharing. In the 2012 report of the non-government members to the *Prime Minister's Manufacturing Taskforce*, the call for university–industry collaboration, especially with SMEs, reflects the need to transform the views of academics and how they engage in research activities. This can increase Australia's ability to turn fundamental research, including higher risk, breakthrough research, into new-to-market and world-first innovations. In the 2014 *Thinking Business: Industry–Research Collaboration Report*, the NSW Business Chamber identified that businesses involved in collaboration are expected to be in better positions (by 70%) to develop new-to-the-world product innovations. In a similar vein, the 2013 OECD report indicates that Australia would require a fivefold increase in industry–research collaboration with SMEs and a 16-fold improvement with large firms to obtain collaboration levels consistent with the top OECD countries.¹⁰⁴

■ **Interdisciplinary education and training:**

Universities can support interdisciplinary research across the spectrum of scale, with disciplines and their research impact addressing the needs of industries, sectors, regions and broader communities, as well as global challenges such as climate change and sustainability, energy, environmental and national security, water quality and health.

■ Although there is a reasonable number of universities that offer entrepreneurship and innovation courses, teaching entrepreneurship in interdisciplinary fields remains a rigorous task for universities. To be interdisciplinary in nature is about creating education and training pedagogies that traverse traditional fields of study and use methods and insights of two or more of the established academic disciplines, such as design, technology and engineering. Specifically, the increased market interest in entrepreneurship and innovation has influenced the pedagogy of entrepreneurship education and training.¹⁰⁵ Non-business students such as engineering and science students are beginning to learn and acquire entrepreneurial and innovation skills through a new framework of specially designed disciplinary programs.¹⁰⁶

■ **Portfolio management for life-long learning and personalised, just-in-time education:**

Education and training at universities will be 'for life' and the learning will become a part of recreation. Students should be able to acquire personalised education in small chunks, in different ways and at different speeds based on their own pace of learning. The traditional education system appears to be so rigid that it limits students' ability to pick up credits (on demand) through flexible arrangements. In fact, students should be able to re-skill, up-skill and/or re-enter higher education throughout their career and working life. This might appeal more to non-traditional students, typically those adults who are working and seeking degrees or further education, than to traditional 18–24-year-old students entering universities. Correspondingly, such data analytics used by



Amazon or Netflix to recommend movies can be adopted and applied to higher education by means of collecting and analysing how each student learns and then fine tuning teaching to the students' individual needs. Data and knowledge management is the fundamental source of innovation for the 21st century, and is to be acquired, assimilated, transformed and exploited to its full potential.

- In capturing and assessing each student's learning and experience, the future emphasis should be based on portfolio management, competency-based assessment, skills recognition and achievements rather than focusing on certain 'degrees' or 'qualifications' noted on the academic transcript. A Swinburne emerging leader

program has begun to identify the soft skills of the students on the transcript; this is expected to be the most important part of the transcript of the future. These skills include, for instance, teamwork and collaboration, research and analysis, critical thinking, problem-solving and decision-making, communication, the ability to tackle unfamiliar problems, independence, taking initiative and being proactive (self-directed), and the ability to learn from situations and events, including failures, success and leadership. This new type of transcript allows potential employers to understand the core skills and capabilities of a student. Moreover, it highlights the 'outcome' that can be used when seeking further skills, education or employment.

- **New learning model and peer-to-peer interaction:** There is a need to completely redesign the curriculum and approaches to teaching and learning for students to have a truly 'engaging' experience—that is, the curriculum should be practical and varied in its delivery, and should provide a fully hands-on experience with activities, small seminars, workshops with facilitated learning and discussion, real-world case studies with elements of community and social learning, work placement, study tours, and active monitored feedback and contributions from students.

- Classrooms should be used for collective and cooperative learning through teamwork and experience with facilitators who can encourage peer-to-peer learning and interaction, as opposed to traditional lecturers and exams. At present, we have started to see the transition from traditional teaching methods to an online and blended or flipped learning model. Students can watch an online lecturer prior to class and then participate in the learning process with other students to question, discuss, argue and debate the

who play a vital role in co-creating and distributing their knowledge and discovery.

- **Utilising innovative technologies:** Currently, there are approximately 1.7 billion people who are on Facebook, 1 billion on Messenger, 500 million on Instagram and 1 billion on WhatsApp each month. Rapid and dramatic developments in digital and modern technology, artificial intelligence, and the Internet have recently outpaced the development of the

Rapid and dramatic developments in digital and modern technology, artificial intelligence, and the Internet have recently outpaced the development of the education sector.



materials in a 'safe space'. The next generation of students will be familiar with the non-traditional ways of learning through hybrid and mobile technologies, online formats, flipped classrooms and virtual campuses. They will not be interested in learning through the traditional teaching methods and models of higher education, such as a 120-minute lecture or a long wait for a response via email for any learning feedback. With so much data, information and entertainment available through electronic devices, gaining people's attention is a priority. Young people think and read differently; they navigate and process information that has not been laid out by traditional rules of order like it was for older generations. They are well connected to large networks and communicate in quick bursts of short messages that enable them to receive instant feedback on their thoughts and ideas within seconds. They are not passive learners, but 'active learners' and 'content producers'

education sector; students are bringing their own technologies to university. We are going through a technological transformation; thus, we need to embrace the opportunity given by the digital revolution. New and advanced technologies connect us globally and will always now be part of our development and growth. Technology has changed and introduced new ways of interacting with services and capabilities, particularly the innovation of engaging and delivering learning in an increasingly diverse and dispersed environment. This has occurred in the forms of open source learning, new study options, mass live streaming and open courses that are able to reach previously unreachable individuals, now without geographic boundaries. Individuals have access to world-class education at a greater speed and at a lower cost. If we think of Moore's Law, the cost and the prices of technology will fall steadily over time.¹⁰⁷ We can therefore expect that the number of users will



continue to increase for the next generation and this is likely to revolutionise the landscape of education—it might now be time for us to consider working with new technologies, including students' technology, to further support their learning.

- **Inspirational mentorship:** The students of the future will require a 'coach' or a 'mentor' rather than just a lecturer; this is an important stepping-stone in facilitating students' success in their academic and professional accomplishments. Mentors can provide counselling and advice to assist students' (mentees') performance and to help them realise their life goals, their dreams and their potential. They can also foster qualities and content essential in professional standards, traditions, ethical and social values of the community to develop the career paths of mentees. In turn, this offers opportunities for mentors to become role models to the students, which can create a greater sense of self-esteem and enhance professional skills.

Example of Innovative Education and Training Program, 'The BioReactor'

The current boost from public policy and the Australian Government's National Innovation Science Agenda (NISA) to increase Australia's capacity to innovate has recently been a topic of discussion among policy makers, organisations and academics in the broader community. This involves initiatives such as increasing biomedical translation funds to commercialise promising discoveries and flourishing entrepreneurial talent and skills.

Notwithstanding the importance of the recent NISA discussions, there appears to be a limited number of Australian education and training programs in entrepreneurship and innovation that engage university, government, industry and other end-users, particularly in the context of interdisciplinary research and practice.

Based on Commonwealth of Australia data in the 2015 *Intergenerational Report*, encouragement of entrepreneurship and innovation and improvement of human capital investment are necessary to

improve Australia's future productivity performance.¹⁰⁸ In the face of dynamic global conditions, the education, skills and experiences of individuals can have an effect on the economy as a whole.

The Swinburne BioReactor, a new Doctor of Philosophy (PhD) training program in technology innovation, is bringing about a paradigm shift from traditional PhDs to industry-oriented PhDs by incorporating concepts of 'design-led innovation' into training and 'entrepreneurship and innovation' into education. The program has primarily been designed to develop science and engineering students to be the next generation of entrepreneurs, industry-ready applied researchers and future leaders in the field of biomedical engineering—specifically, biomedical devices and diagnostics. It must be noted that 'graduates of the technical and engineering disciplines (more than graduates of other disciplines) are expected to find companies in dynamic, innovative areas that will generate significant economic growth and boost employment'.¹⁰⁹ Accordingly, the program caters to the specific needs of the Australian Medical Technology (Medtech) industry and

directly addresses the skills deficit in the sector by providing a groundbreaking, integrated research- and industry-focused training through a unique and innovative stage-gate program structure that reaches beyond science and engineering capabilities to entrepreneurship and innovation skills for new ventures. In addition to developing a PhD thesis as part of the program requirement in the conventional setting, students are required to demonstrate their outputs for the industry sector (e.g., experimental results, product prototype or system). In doing so, they are supported by a supervisory team that includes an academic supervisor, industry consultant, and a mentor from various sectors. With the aim to develop exceptional university-industry research collaboration and address the need to embrace commercialisation,

the program is backed by a
\$1.8 million
ARC Industrial
Transformational Training
Centre grant

for the creation of the ARC Training Centre in the Biodevices BioReactor. The BioReactor centre itself consists of an intrinsically multidisciplinary support team, which includes advisory board members; a director; a deputy and education director; and industry liaison and postdoctoral researchers in the fields of biological interface, product design, and entrepreneurship and innovation.

To offer additional support to the students, the centre also entails a PhD coach-psychologist, business strategy analyst, and an academic language and learning adviser.¹¹⁰

Overall, the BioReactor program offers a contextual approach and guideline for designers and educators to take on the directions and develop the education and training program of the future, especially in areas of biomedical engineering. Nevertheless, we need more of this type of program, and for it to be applied at both undergraduate and postgraduate levels and across different contexts and industries for the future of our Australian education sector.

Universities will have to keep moving strategically forward and shift away from focusing only on tradition or the status quo of what has worked well in the past.



Summary

Although the only constants in today's global markets are change and the fact that we cannot therefore be certain about our forecast into the future, universities will have to keep moving strategically forward and shift away from focusing only on tradition or the status quo of what has worked well in the past. There is often a tendency for universities to channel investment and funds repeatedly into their current moneymaking sources, mainstream offers and target markets, to avoid the risk of stretching into unfamiliar academic processes, new areas of expertise or technical competency and unpredictable student markets. The rapidly changing world and technological environment, the impact of demographics and economy, new and emerging approaches and methods of teaching, learning, assessing and accrediting will, however, affect all universities to some degree.

Universities should embrace the change as a valuable opportunity, explore reconfiguring and altering internal resources and capabilities in advantageous ways to improve their performance and create sustainable competitive advantage. We need to observe and reflect deeply on the

hidden and unarticulated needs and potential changes in the students of the future, to visualise how best to 'create and control demand' for education and training of the 21st century. We also have to acknowledge that each university will have different student compositions and segmentations; there are no 'out-of-the box' or 'one-size-fits-all' solutions that will suit all students.

This chapter has provided a starting point of consideration and general guidance into the future of education and the future needs of students by highlighting, for instance, the importance of technical and non-technical skills in human capital development, including cross-disciplines; technological adaptation and transformation; collaboration among universities, governments and businesses; and translation of research and discoveries into innovation outputs for a strong innovation productivity and ecosystem in Australia. It is hoped that universities will now begin to reflect and invest in revolutionising and reshaping overall student experience and education systems to take control of tomorrow's higher education market, today.

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Brad Griffiths

Brad Griffiths is recognised as a trusted adviser with deep business insights based on strong analysis and is a respected communicator and exceptional relationship builder who has a proven track record in challenging environments.

He has worked on various transformation projects driving towards objectives such as culture change, setting new strategic directions, integration of acquisitions and cost reduction. These projects have achieved results that include the commercialisation of a monopoly culture, high engagement around business growth agendas and overhead savings of \$50 million.

His approach is to drive for clarity of organisational strategic objectives and then ensure that the myriad details of the change are planned well and

then implemented with a collaborative and compassionate human face. As a consultant he has also advised clients in government, banking and telecommunications on both strategy and the implementation of organisational change. His educational background includes a Bachelor of Science in Psychology and Industrial Relations (Honours) (UNSW), and a Diploma of Labour Relations and Law (University of Sydney).

An Opinion on Leadership in the New World

It is surprising to me that the approach to leadership and management in the Australian tertiary education sector is so underdeveloped, especially given the approaching avalanche of change. This personal reflection comes after 30 years of working in leadership and strategy development across a broad range of industries and organisations, many of which mirror the complexity of the challenge being faced by the tertiary sector.

What follows is an appeal to turn this 'behind the pack' position into an advantage by embracing the more advanced approaches to organisational leadership that the current environment requires and leapfrogging the situation that so many organisations have struggled with for decades. My view is that this offers a great opportunity for the sector that could be just the key to success in dealing with the challenging future ahead.

Leadership of organisations has for so long been based around a mechanical model that typically relies upon clarity, measurement and accountability enabled through hierarchical structures. This model is now changing due to the increasing speed of change in markets, the growing diversity of the workforce and an emphasis on reflecting essentially human values. The tertiary education sector now has the opportunity to leapfrog the outdated mechanical paradigm and adopt new approaches. The new model will require new skills and a mindset shift for leaders; however, those who do not dedicate substantial effort and resources to leading people in the new paradigm will be unlikely to survive.





The Old (or Current) Model

From the time that Alfred P. Sloan and Henry Ford started codifying the management of large corporations and mass production as a systematic methodology or discipline, there has evolved a simple recipe that is used to lead organisations:

1. Give people **clear** roles—within a clear organisational structure (although the structure changes regularly when it does not seem to be working).
2. **Measure** their outputs—using key performance indicators, budgets and annual targets, and endless reporting (although recognising the measures are blunt, without any nuances and lead to extraneous and odd behaviour).
3. Hold people **accountable** for results—provide rewards and punishments according to achievement (although struggling to provide constructive, useful feedback).

The fundamentally mechanical model may be effective in organisations with standardised stable production environments where managing the organisation is akin to designing and operating a machine. The real competitive value in organisations today primarily comes from creative work that solves complex, multi-dimensional problems, often involving human relationships. Robots do the repetitive work and, increasingly, the simple knowledge work.

This model assumes that leading people is akin to designing and operating a machine—it may have happened in standardised, stable production environments of the past but no more.

The Environment is Changing and so is Leadership

The mechanical model tends to be rigid, staid and constricted while the macro environment for all organisations is now fast-moving, discontinuous with the past and highly interconnected (or VUCA—Volatile, Uncertain, Complex, Ambiguous)*.

In Australian higher education, this has been manifested by:

- **Volatility**—How will a traditional sector cope with the speed of change being forced upon it by global shifts in education?
- **Uncertainty**—How will government funding be structured? What disruptive role could MOOCs play?
- **Complexity**—How can we simultaneously meet the needs of student, government and corporate ‘customers’ in both teaching and research?
- **Ambiguity**—How are universities graded other than through Excellence in Research Australia (ERA) rankings and how can you measure great teaching and the students’ personal growth that universities offer?

As the environment shifts, there is a need to adapt to survive and thrive, and opportunities will arise that can be exploited for greater success. Changing the approach to leadership of people in universities represents a major opportunity.

It is possible to maintain the three elements of the mechanical model and adapt these into a new paradigm that reflects the basic elements but is much more suited to the VUCA world. In rethinking the mechanical model, it has evolved so that:

1. **Clarity** is about providing clear, high-level organisational values and culture and relying on people within these to undertake their work of contributing to the purpose of the organisation (typically framed around meeting a customer need).
2. **Measurement** has become increasingly sophisticated (including ‘big data’) and provides this information transparently so that people can adjust their work.
3. **Accountability** has both individual and team dimensions and is increasingly focused on holding one’s self and one’s peers accountable for outcomes.

The core ‘machine’ dimensions are still present but there is a broader definition of how the machine should operate and much greater expectation that it will be self-guiding and self-adjusting—much more organic. Of course, these approaches to leadership are yet to settle and to prove whether they are actually viable in the VUCA world, but it seems clear that the old mechanical model is not suited to the new environment.

* This acronym is generally regarded as coming from United States military thinking about geopolitics in the 1990s. It has entered management strategy thinking over the last ten years as markets and corporations have been hit by seemingly continuous crisis and disruption.

Future Leadership in Higher Education

The HES should find it easier to change the mechanical model because it has not implemented it to any great extent. I have not seen much evidence across the sector of effective performance measurement and reward systems that are focused on business results, and so the opportunity exists to ‘leapfrog’ and move to a new paradigm. To deliver future leadership, organisations in the sector should focus on the following three areas of development.

LEADERSHIP OF CULTURE

In an increasingly competitive marketplace it will be important for universities to take distinctive positions that fit with their strategy and address the unique needs of their target customers, both students and industry. These distinctive positions will be based on clear strategy but delivered through a distinctive culture. It is well understood that in a competitive marketplace ‘culture eats strategy for breakfast’ (a quote attributed to the late Peter Drucker). The way leaders think, behave and the choices they make will set the

culture of the university and must be consciously shaped by the leadership at all levels.

There will need to be considerable work done on familiarising leaders with their culture and engaging them in cultural aspirations. While universities do have distinctive cultures, these have generally not been deliberately designed and built, and are more a product of history, coincidence and, in some cases, the long shadow of a charismatic leader.

| QUESTIONS FOR LEADERS | QUESTIONS FOR ORGANISATIONS |
|---|--|
| How does my mindset need to change to shape the desired culture? | How well do we describe our distinctive culture and align it to strategy? |
| How do I communicate the culture to people in my team and our stakeholders? | What are the appropriate strategic settings to support our culture? E.g., speed of change, level of consultation. |
| How do I overcome the systemic barriers to shaping our desired culture? | How do we reward or punish those who live the culture? |
| How can I share the leadership role and does the role need to be my permanent role? | How could rotating the leadership roles (such as Head of School) improve the quality of leadership? Would it fit with our career and other structures? |

LEADERSHIP OF INDIVIDUAL PERFORMANCE

This has been patchy to non-existent in the sector as academic freedom, a sense of entitlement and other constructs have been used as excuses to avoid dealing with those whose contribution has been minimal. Almost all institutions have stories of academics who demonstrably contributed nothing in either research or teaching but remained paid as tenured staff for many years, often somewhat disgruntled and critical of the institution itself.

Nevertheless, the contribution of an academic or researcher is complex and cannot be reduced to a few simple measures (though it often is; ERA ratings come to mind). The leader's primary role is to improve performance and this is much more a process of dialogue, listening and understanding—supporting for success.

Rather than thinking about how we might maximise output from a machine, we should think about how we might improve a musical

performance (coaching?) or a marriage relationship (dialogue?) or the feel of our neighbourhood (design?). These are better strategies for leaders to think about improving performance and have much more in common with organic processes than machine processes.

The kind of leadership skills required to maximise performance are those of the:

- **Coach** – training, planning, correcting
- **Counsellor** – asking questions, listening, gently advising
- **Co-designer** – drawing out the best ideas, contributing as an equal, sharing expertise.

Performance outputs may still be measured but a different leadership approach is required to achieve them.

| QUESTIONS FOR LEADERS | QUESTIONS FOR ORGANISATIONS |
|---|---|
| What are the individual needs of each person that I can meet to bring out his or her best? | How do we provide nuanced measures of performance that capture the complexity of what people must deliver? |
| How do I conduct an engaging dialogue with each person to enhance his or her performance? | What processes will actually support performance in the new paradigm rather than just meet the old mechanical need? |
| How do I help each person develop so he or she can continue to perform in a context of increasing expectations? | How do we manage those unable or unwilling to perform to expectations while living by our values? |

Leadership skills and, more importantly, the desire to lead need to become important criteria in appointments to leadership roles.



LEADERSHIP OF CHANGE

While this has become a constant topic of conversation across so many industries, there are a few sectors where little has changed in centuries, but much will certainly transform over the next decade. The ability of leaders to support people through this change will be essential. Leaders will need the capacity to demonstrate how to set the appropriate speed of change, how to deliver new structures and services and how to partner with new stakeholders to understand commercial investment cases; moreover, they will need to understand the impacts of new technologies regardless of discipline.

One feature of change in all universities is the pressure on the middle leaders—those between the executive and the front line; a distinguishing feature of those universities who change successfully will be the ability to equip these people with tools, skills, buy-in and reasonable expectations. There is also a need to ensure that they actually want to lead people as a significant part of their role. Generally, academics have not entered their career with an intention of leading teams of people and often see their leadership tasks as a distraction rather than their core contribution. Leadership skills and, more importantly, the desire to lead, need to become important criteria in appointments to leadership roles.

| QUESTIONS FOR LEADERS | QUESTIONS FOR ORGANISATIONS |
|---|--|
| How prepared are my skills for the new world? | How do our competency frameworks reflect what is required now and into the future? |
| How do I personally respond to widespread rapid change and uncertainty? | How do we support people through the difficult events sometimes associated with change and celebrate the achievements? |
| What is my motivation for seeing the change succeed? | What is our narrative for engaging most people positively in the change? |

Conclusion

Much in the tertiary sector is changing rapidly and it will not be an easy transition for most universities; however, leadership will be the key to success and leaders are the only ones who can provide that leadership to their people.

The three areas of culture, individual performance and change should be the focus of the most effort. To lead well will consume a lot of time and will need to take priority over other activities that are seen as core, such as managing external stakeholders or undertaking interesting research.

The final question for the most senior leaders who want their university to thrive in the challenges ahead is:

What proportion of my time do I spend in the explicit act of leading the people who serve the customers of this university?





Peter Watson

Peter Watson is a senior HR and change management professional with extensive experience in HR Transformation. He has led, designed and facilitated new HR service delivery and operating models, from shaping the strategic people agenda in the boardroom, to building line manager and HRBP capability, to the implementation of IT solutions that bring workflow efficiencies, analytics and insights for decision makers.

Peter has international experience with large blue chip organisations, with universities in Australia and numerous commercial, NFP and public service organisations which enables him to have a practical perspective on HR Transformation and the challenges and opportunities to optimise the contribution of HR. His passion and key areas of expertise lie predominantly within areas of Performance Management, Leadership and Talent Management, Rewards and Recognition, HR Strategy and Implementation. He holds a Master of Commerce (Organisational Behaviour) (UNSW) and Bachelor of Arts, with majors in Industrial Relations and Psychology (UNSW).

Human Resources Transformation: People, Process, Structure and Systems

HUMAN RESOURCES TRANSFORMATION IN HIGHER EDUCATION

It is almost 20 years since Dave Ulrich's seminal book *Human Resource Champions* announced that:

*"Companies now are finding that the HR issues are, in fact, centre stage to business competitiveness. The intellectual capital, core competencies and organisational capabilities are all the pieces that are central to success."*¹¹¹

The role of the HR business partner was defined and the stern challenge for HR to add value or be discarded was issued.

After all this time, we are still at various stages on the journey of HR becoming a strategic business partner. Along the way, the urgency to do so has increased and the changes that started out as evolutionary have become greater, more radical—now, it is a transformation that is required. This probably says as much about the degree of difficulty, the constraints that have been encountered and the seismic shifts in the global economy since 1997 (and not Ulrich's vision as an unachievable utopia). Millions, if not billions have been invested, global enterprises and software platforms have been built and thousands of jobs have been automated or outsourced—all in the pursuit of HR transformation.

So where is HR transformation in the HES in Australia? What can we learn from the endeavours of those around us?

What are the trends? Are there opportunities for the HES to forge a new path, to bring knowledge, learning and practice, consistent with the mandate of the universities in which we work and which we are seeking to enhance? Can this be the characteristic of HR transformation in higher education?

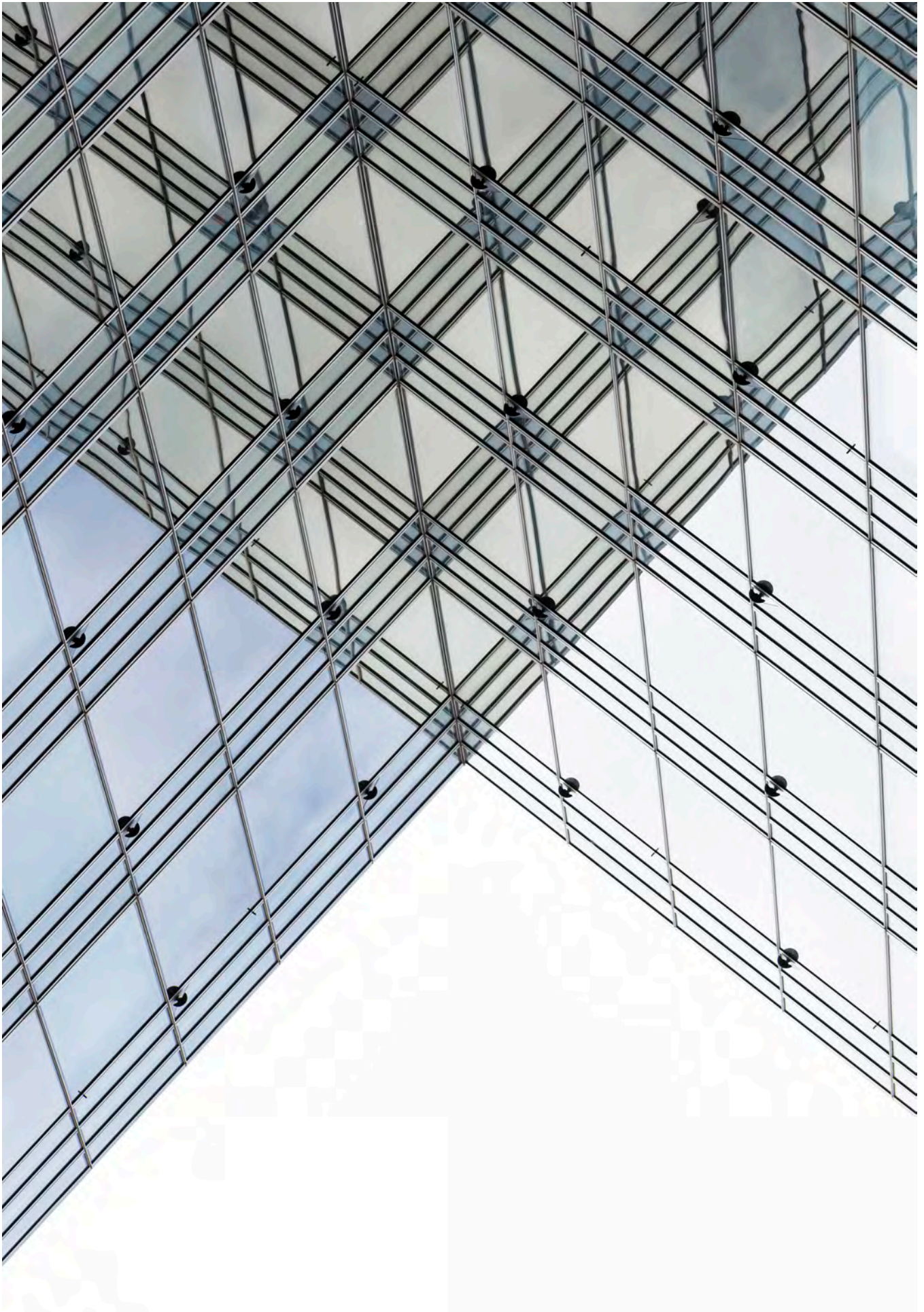


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HUMAN RESOURCES TRANSFORMATION AND BUILDING HUMAN RESOURCES' CREDIBILITY TO LEAD CHANGE

In most organisations, and not just higher education, changes in HR service delivery, organisational structures, roles and technology remain a priority. Labelled HR transformation, these activities are central to a university's organisational transformation agenda. The Corporate Executive Board's 2014 Agenda Poll found that 81% of the HR leaders surveyed were prioritising some change to their operating model.¹¹² The changes were driven by:

- pressure for competitive advantage through people
- dissatisfaction with current levels of service delivery
- cost constraints
- expectations of executive leaders increasing.

Lee Hecht Harrison (LHH) partners with a majority of universities across Australia and New Zealand and there would not be a single university that is not undertaking some degree of change within their HR function. This is evident in the ranks of the HR leadership. It was noted during the stakeholder interviews conducted for LHH research that more than 50% of universities have made a new appointment in last 12–18 months, many from outside the sector, all with a mandate to raise the efficiency and effectiveness of HR.¹¹³

The challenge for HR transformation today is the sheer amount of organisational change that is happening around it at the same time. Organisational change is a constant and the change is more complex than ever before, not to mention that universities are complex organisations to start with. The question then becomes: how much can HR itself change while at the same time supporting organisational change? Strategy, structures, processes and capability, and improving everything while doing your day job—the risks are enormous, especially for the HR team members who are carrying the load. HR's credibility as a change agent is on display: it must be capable of successfully managing its own transformation.

However, challenge also brings opportunity. Two of the key competencies that Ulrich identified as being needed for HR transformation are the 'credible activist' and the 'change champion'.¹¹⁴

With a structured development plan and the appropriate support, HR transformation provides a 'safe' learning environment for HR teams to acquire the competencies required to support internal client groups with their own organisational changes.

During the interviews that LHH conducted with HRDs for this publication, frequent reference was made to the significant room for improvement across all areas of HR to make a measurable contribution to their university's capacity to realise its academic and corporate goals. By integrating talent development with participation in HR transformation activities, HRDs have a practical and experiential learning and development opportunity for their teams to build the required competencies.

Cut-and-Paste—A Short Cut to Transformation?

Since it is generally agreed that the HES lags behind HR transformation in similar-sized (revenues and staff) organisations in Australia and New Zealand,¹¹⁵ it would not be unreasonable to propose that the most expedient approach would be to ‘cut-and-paste’ the most effective features of HR transformation from outside the sector. But before doing so, it may be worth considering some of the features of the HES and the implications these have for HR transformation.

A central but sometimes overlooked feature of new HR operating models is the crucial role of the line manager, for instance, their willingness and their capability to manage their staff. In higher education this poses some challenges that, from a skills perspective, may be similar to the challenges of organisations in other sectors. However, in the higher education context these challenges are accentuated by the degree of acceptance that an academic leader may have for their role as a manager of people. Furthermore, other structural challenges may exist—for example, spans of control. LHH has worked with universities where flat organisational structures mean that academic leaders have extremely large numbers of direct reports. Features such as these must be addressed or accommodated for HR transformation to be successful in higher education.

The sessional or casual workforce presents a particular challenge for HR transformation. This group of employees is crucial in providing learning and teaching to students in their first year of study. Yet, in many instances the sessional workforce’s relationship with HR does not go much beyond an employee number, a timesheet and a payslip. As a group who can directly influence the initial student experience and be a source of future talent, an HR transformation strategy that does not recognise the important role of the sessional workforce and improve the programs and services available to them will hinder the achievement of the university’s academic and corporate strategies.

Change management can have a different meaning in higher education institutions because it is a term associated with the process by which a university implements structural change. This process, specified in enterprise agreements, has the potential to slow a transformation down to a crawl. Urgency creates a dilemma for HRDs: why should they treat their teams any differently from how staff members in other areas are managed? However, a restructure associated with an HR transformation allows an HRD to demonstrate that the process can be managed fairly, with respect for the individual and include more of the practices of contemporary change management. This increases the likelihood of sustainable change,



paving the way for a negotiated enhancement to the change process and enabling the university to be more agile in the long run. This is a strategic imperative for the HES that HR should be leading.

Lastly, the language of transformation in the sector is tempered. The author was once cautioned about using the word 'change' because it was deemed to mean redundancy. Similarly, the word 'performance' is skirted around with a myriad of synonyms used instead. There are many other words that receive the same treatment. This hinders the clarity and the candid conversations that are required in higher education. HR transformation is the chance for HR to own the language of change and transformation, and not be distracted by debates about the meaning or use of a particular word. Language reveals an organisation's culture, which is sometimes more obvious to an outsider than those who belong to the organisation.

In summary, exercise caution with the cut-and-paste approach to HR transformation but be bold enough to shape the university's capability to change and transform. In universities with systemic barriers, entrenched cultures and resistance to change, HR's role in change leadership is crucial.¹¹⁶

Overcoming Barriers to Human Resources Transformation—Stakeholder Views on Workplace Relations

An important and recurring theme in LHH's higher education stakeholder interviews is the view that the current industrial relations frameworks and the enterprise agreements need to be overhauled. When asked, 'if you could change three things at your university what would they be?' executive leaders frequently said that they would like to change their enterprise agreement.¹¹⁷ This is not to say that the role of collective agreements or unions are unwelcome in the university of the future, it is more that stakeholders see a need to accelerate the development of a workforce that is flexible, capable and adaptable. On the basis of LHH's experience in the sector, we would have to concur with this view.

Recently, LHH encountered the challenges of 'job fit'; that is, having the right person in the right role at the right time—on this occasion during a workforce transformation. The criteria were to be research-focused, teaching-focused, and a blend of research- and teaching-focused, and yet the ability of the university to place staff where they can do what they do best was constrained by the enterprise agreement. Nor was this instance one in which the university was unilaterally appointing staff into various roles because the staff members themselves were agreeable to the redeployment. Furthermore, staff are becoming increasingly disinterested in teaching positions, with only 30% preferring

teaching to research positions.¹¹⁸ This is not a win-win outcome for the university and its staff.

The proportion of the workforce that is sessional or casual is an industrially sensitive issue, with only 35% of academic staff reporting feeling secure about maintaining their positions.¹¹⁹ Previously in this chapter, the important role of the sessional workforce in providing an exceptional student experience, especially in their first few years at university, has been recognised.

30%
preferring teaching to
research positions.¹¹⁸

A re-examination of the size and the role of the sessional workforce is required, as well as a candid assessment of why this segmentation of the workforce has occurred, including the impact of the frameworks and the enterprise agreements that are in place.

A collaborative review could possibly increase the proportion of ongoing positions. It may appear counterintuitive but the enhancement of a university's capability to effectively manage performance could lead to improved job security for many and, overall, a more sustainable workforce. Maintaining the current workforce segmentation and, indeed, defending against encroachment will continue to impede organisational transformation.

HR transformation requires process redesign and simplification, especially if technology implementation, online workflows or increased involvement of line managers in HR transactions are planned. Unfortunately, higher education institutions are a maze of rules, allowances, exceptions and work-arounds that make HR's workload highly transactional and bureaucratic. A senior sector executive that LHH interviewed lamented how universities had fallen into the trap of codifying everything in their enterprise agreements, and commented 'once it's in, it's there to stay', with the next agreement adding a new layer of prescription and complexity. Without a concerted plan to de-clutter their enterprise agreements, streamline processes and devolve decision-making, HR transformation strategies that have been successful outside of the sector will not have the same effect in higher education.

LHH is experienced in supporting transformation in organisations with a unionised workforce across a wide variety of industries and, hence, can bring a broad perspective as well as expertise into this area of practice in the HES. A strategic view is required, instead of a view that is limited by the duration of an agreement or the creation of 'wish lists' when an agreement is about to expire. Building and maintaining a partnership model of consultation and involvement with staff representatives and unions to put in place enterprise agreements that enable organisational growth and renewal will be vital.



Learning from Human Resources Transformation

New HR operating models are heavily influenced by Ulrich's design principles, with three main groupings: client-facing or business partner roles, shared services and centres of expertise.¹²⁰ For the client-facing or business partner roles, the aim is to be as close to their client groups as possible, so physically locating them with their client is common practice. This is also a highly visible demonstration of the HR transformation that is taking place. However, it is not without some risks, as a senior HR executive noted: 'The issue of preventing the HRBPs [Human Resources Business Partners] "going native" is key, if they do so, the HR function begins to lose its integrity of strategy and thinking'.¹²¹ This is a result

of the HRBPs aligning themselves with the client group more strongly than with HR. This unintended consequence of the devolution of HR may be avoided by ensuring that the HRBP is suitably qualified and experienced enough to manage clients' demands, the HRBP role is clearly defined and aligned with the client group, and the HR systems, processes and communication channels are in place for a distributed or embedded HR organisation.

HR transformation requires an honest self-assessment of current service levels, systems, processes and competencies. The 2015 *Insync & AHRI (Australian Human Resources Institute) Survey*¹²² revealed that execution is a problem in the eyes of executives. In all of the 17 HR attributes from the AHRI Model of Excellence¹²³ included in the survey, executives rated HR performance lower than HR rated their own performance. Prioritisation and measurable improvements require external benchmarks and insights. Collecting client or customer feedback is crucial. In one university, the removal of the 'flags' that had locked the fields and had prevented academic managers from updating staff records in an online performance management system created an enormous amount of positive feedback. The customer felt that they were being listened to and the responsiveness of HR to their clients' needs led to increased academic involvement in people-management responsibilities.

weight of available evidence,¹²⁴ this conclusion may be regarded as obvious. But why do we regularly encounter this oversight when HR is managing its own transformation? HR should apply to itself the same change strategies and resources that their internal clients would demand.

Control, compliance, checking and keeping copies! HR needs to let go and take a risk-based approach, and assess likelihood and impact. Time and again the author has had the experience of managers or employees understanding that the timeliness and the accuracy of the HR data rests with them, and yet the ownership for and the quality of the data is maintained without HR intervention.

Building the people-management skills of managers and trusting them to perform this role makes HR transformation possible. So, it is for HR to assess their own contribution to the quality or the value of the processes that they touch. How else will HR be able to free itself for the work that

Control, compliance, checking and keeping copies! HR needs to let go and take a risk-based approach, assess likelihood and impact.



On a recent assignment supporting a reorganisation in a large public sector HR department, the author was struck by the absence of a culture of 'HR for HR'. The mechanics of the change were in place—new organisational design, the leadership team, the selection and appointment process, and new workplaces—and yet the transition was not going smoothly. The client had identified communication as the need. This was true, but exploration of the issues revealed much more was needed. The learning—utilising the right change management process—is the most critical key to success in any transformation. Based on the

will have a greater impact and provide real value to managers, staff and the university as a whole?

As an HR leader, these learnings and change success factors are entirely in your hands.

This signals significant news: you are no longer the university's chief HR officer. You are the new chief change officer¹²⁵ who does not create a workforce that merely executes strategy but rather moves with strategy. As chief change officer, you must partner with the leadership team on change decisions and prioritise building a change-capable workforce and HR function.

Building Human Resources' Capability to Transform

Senior academics and professional staff interviewed for this publication have identified building the capability of HR as a top priority. The author's view is that HR must build its capability to transform as it transforms—a characteristic of a learning organisation. The prevailing HR operating model is used as a point of reference with a range of actions to achieve this outcome.

CLIENT-FACING/ BUSINESS PARTNERING

Research by the Corporate Executive Board showed that regardless of the model, the HRBP role has the greatest impact on HR effectiveness. Furthermore, business acumen is the key capability for HRBPs.¹²⁶ The implications for HR in higher education are profound. The HRBP is not just an HR 'generalist', it is a complex and demanding role requiring a mix of personal attributes and superior technical skills. The most effective way for HRBPs to be developed is on the job.¹²⁷ Their development should be supported by the astute assignment of client groups and projects as well as coaching and mentoring from experienced academic or corporate leaders. Diversity among the HRBP team—mixing people from academic or educational backgrounds, or from outside the sector, or with line management experience—strengthens the team's ability to manage complex projects and provides an environment to leverage learning from each other, where 20% of learning occurs.¹²⁸

SHARED SERVICES

A benchmarking survey by the Hackett Group revealed that companies that had adopted an HR shared services model reported reducing process costs by as much as 80%. The savings most often came from reduced staffing in HR. According to 'world-class' HR organisations (defined as the top quartile of 125 companies benchmarked), the companies spent on average 13% less on HR per employee.¹²⁹ Universities have the size and scale to make these savings an attractive proposition.

To execute a shared services strategy, HR

13%
less on HR per
employee.¹²⁹

teams must have the requisite Human Resource Information Technology (HRIT) capability, project management skills and strong partnerships in place with the information systems and finance teams. Formulating a shared services strategy also means addressing tough questions (such as is payroll core or non-core?) without destabilising the HR team. Finally, the business case needs to be able to quantify the intangible benefits of releasing HR from administrative tasks to provide services and support of greater strategic value to the university. These factors not only make a shared services implementation a challenging prospect, but also, for those who take it on, the platform for a significant lift in HR capability.

CENTRES OF EXPERTISE

Centres of expertise are where the specialist functions of HR reside, designing the frameworks and delivering programs to realise the university's people strategy. A centre of expertise model enables a common criticism of a functional model—that these areas tend to operate as silos—to be overcome. For example, when a competency framework is developed, it is seamlessly incorporated in recruitment and selection practices, or when a Workplace Health and Safety initiative is launched it connects with employee engagement programs. However, for HR transformation in higher education this level of integration is not enough; HR frameworks and practices must be integrated with academic and corporate processes. For example, performance management, remuneration and academic promotion should be aligned, as should corporate planning, reporting and performance planning. Centres of expertise will increase the impact of their contribution to HR transformation by drawing on the insights from HR analytics from 'shared services' and clients' demands as provided by 'business partners'.

For the HR leadership team, the critical issue will be the capability to manage the end-to-end HR service and program delivery, seamlessly co-ordinate the teamwork between the HR groups and optimise the performance of HR operating model as a whole, while being a business partner to the executive team. HR's investment in its own development in line with the 70/20/10 principle of where learning takes place will enable the HR transformation to be realised.

Human Resources Transformation and the Employee Champion

Has HR transformation compromised the role of the 'employee champion'¹³⁰ or has it been misinterpreted? The shift to manager and employee self-service, the investment in technology and online systems, the first point of contact being a call-centre (often outsourced and offshore) and the HRBP in the office next door asking 'have you got a ticket' regarding your enquiry about an HR issue, have allegedly increased the disengagement levels of employees.¹³¹

This is not to suggest that HR does not care about employees—an inherent characteristic of people who are in the HR profession is that they are people-oriented. What is instead being proposed is that through the evolution of HR operating models, technology and cost cutting, HR has found it difficult to transform without creating this perception.



For HR, the consequences of HR transformation have been dramatic, and in some cases painful. On average, it has been estimated that around 25–30% of HR staff have lost their jobs in the transformation process, with another 20% or so to follow them over the next few years. A study by IBM's Institute for Business Value estimated that some transformations eliminated up to 70% or more of the workload of the traditional HR generalist.¹³²

In a provocative article, the Great Place to Work organisation in the UK suggested that the HR department should be sacked because the employees surveyed felt that HR had become too aligned with management.¹³³ This sentiment was caused by the changes in HR to becoming a business partner and HR being too willing to shed their concern about the welfare of employees.

The social welfare origins of HR have been long derided, but has the 'pendulum' swung too far? Or has the role of the employee champion evolved during the last 20 years of HR transformation without sufficient dialogue and understanding of what it means to be an employee champion in modern organisations? Should this be of concern to HR in higher education?

Universities may be becoming more corporate; however, their HR transformation will benefit from sustaining the role of the employee champion, albeit a more contemporary version. People are at the heart of universities; therefore, academic leaders must take greater responsibility for people-leadership. HR's contribution is to develop academic leaders who understand their role and practice people management in a way that empowers staff and builds engagement. Essentially, the manager takes on the role of the employee champion as well. In partnership with academic leaders, HR should be refreshing the talent pool, providing the pathways for employees who may need to consider their ongoing association with the university and by doing so, championing a positive, collaborative and high-

performing work environment. Furthermore, HR needs to build the arguments for employee-centric practices supported by evidence and insights from the analysis of HR data—they may feel good, but facts underpin the business case.

To be an employee champion, HR should go beyond balancing the needs of the employee and the needs of the university—HR needs to bring emotional and social intelligence¹³⁴ to the executive table, proactively shaping the organisation's academic and people strategies. Operationally, a key pillar is ensuring the organisational fit of employees through recruitment and selection strategies, both external and internal, thereby enabling the right person to be in the right job at the right time. In terms of interactions with employees, to be prominent as employee champions, HR should be where employees need them most: facilitating organisational change, supporting staff when they are most vulnerable and striving for year on year improvement in this important aspect of their role.

People are at the heart of universities; therefore, academic leaders must take greater responsibility for people-leadership.



Human Resources Transformation and the Academic Enterprise

HR transformation in the HES has the opportunity to make a strategic contribution to building universities for the Asian Century.¹³⁵

However, if the HR transformation is conceived as HR getting its ‘house in order’, this opportunity will be missed. HR transformation needs to start with a people strategy that focuses on meeting the needs of the customer—internal and external—and building a workforce capable of delivering outstanding institutional outcomes.

A set of guiding principles should be developed in conjunction with stakeholders. The principles should steer decisions about HR structure, systems, processes and roles to ensure that the HR transformation is supporting the creation of the desired future university. Some of these organisational attributes are universal—agile, networked, collaborative, inclusive, innovative and high performing; others will be specific to the institution.

HR transformation now means practices and processes that are more integrated, because this is what HR should be striving to build—a more cohesive and joined-up enterprise. The HR transformation may be made more manageable by renewing processes sequentially rather than concurrently, so long as an integrated whole of system viewpoint is maintained.

Hence, the conceptualisation and design of the HR operating model requires an understanding of the organisational attributes the university desires, and their rigorous pursuit. The consequences of not doing so will be disconnected systems and

process that do not provide the synergies required for the future academic enterprise.

Finally, there is an opportunity for the HES to set itself apart by ensuring that its HR transformation manages the digital paradox—where people who are further away become closer and those that are close become more distant.

Technology that simplifies the transactional dimension of HR management should enhance the employee experience by being intuitive, immediate and interactive. Universities must enable HR’s presence to be focused on talent development at an individual and organisational level and facilitate change to foster a culture of excellence, engagement and organisational renewal.

Summary

The fortunes of universities in Australia and New Zealand are inextricably tied to HR transformation. It is hard to imagine a university thriving in the Asian Century with an HR function that remains in the 20th century. All the capital investment, information technology and marketing will not be enough without a high-performing and engaged workforce capable of providing a distinct and competitive advantage. Further, it is argued that HR practices can be the springboard; but change leadership in transforming HR is the key.

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KEY TAKEAWAYS

In the course of this report, findings from the interviews with university stakeholders and insights provided by the invited authors collectively support the notion that the Australian university sector is under pressure from multiple forces and arguably on the brink of major and much needed transformation. The challenges and opportunities as canvassed in this report can be summarised in Figure 8 which proposes the following bottom-up approach for universities to consider when planning and implementing their respective change and transformation strategies. The approach consists of three main interactive components:

1. ENABLERS:

This component consists of active internal processes which are suggested to form the “foundation” of future strategic plans. Universities which successfully implement the three: a People-centric mindset, a focus on Leadership Development, and the negotiation of a Fit-for-Purpose industrial instrument; are expected to be better prepared in realising higher-level strategies.

2. STRATEGIC CHOICES:

As part of their planning process, universities will need to make several important and differentiating choices as outlined in this component. The role of true and contextualised innovation is critical for the renewal of the sector and its adaptation to an uncertain, yet uncharted world. The presented strategic choices are based on conclusions discussed in Chapter 2, and will assist in conceptualising the role of the University for the Future, specifically one that encompasses a more sustainable approach to education more firmly based on customer centricity and making the most of what complex cognition brings as opportunities for sustainable growth.

3. OUTCOMES:

The 7 critical outcomes are drawn on the basis of the matters broadly discussed in this report however, they ultimately form our own vision for the University for the Future. It is recommended that universities closely consider these outcomes as potential anchors to their transformation strategies and as part of their respective planning processes and as a way of keeping track of goals and progress.

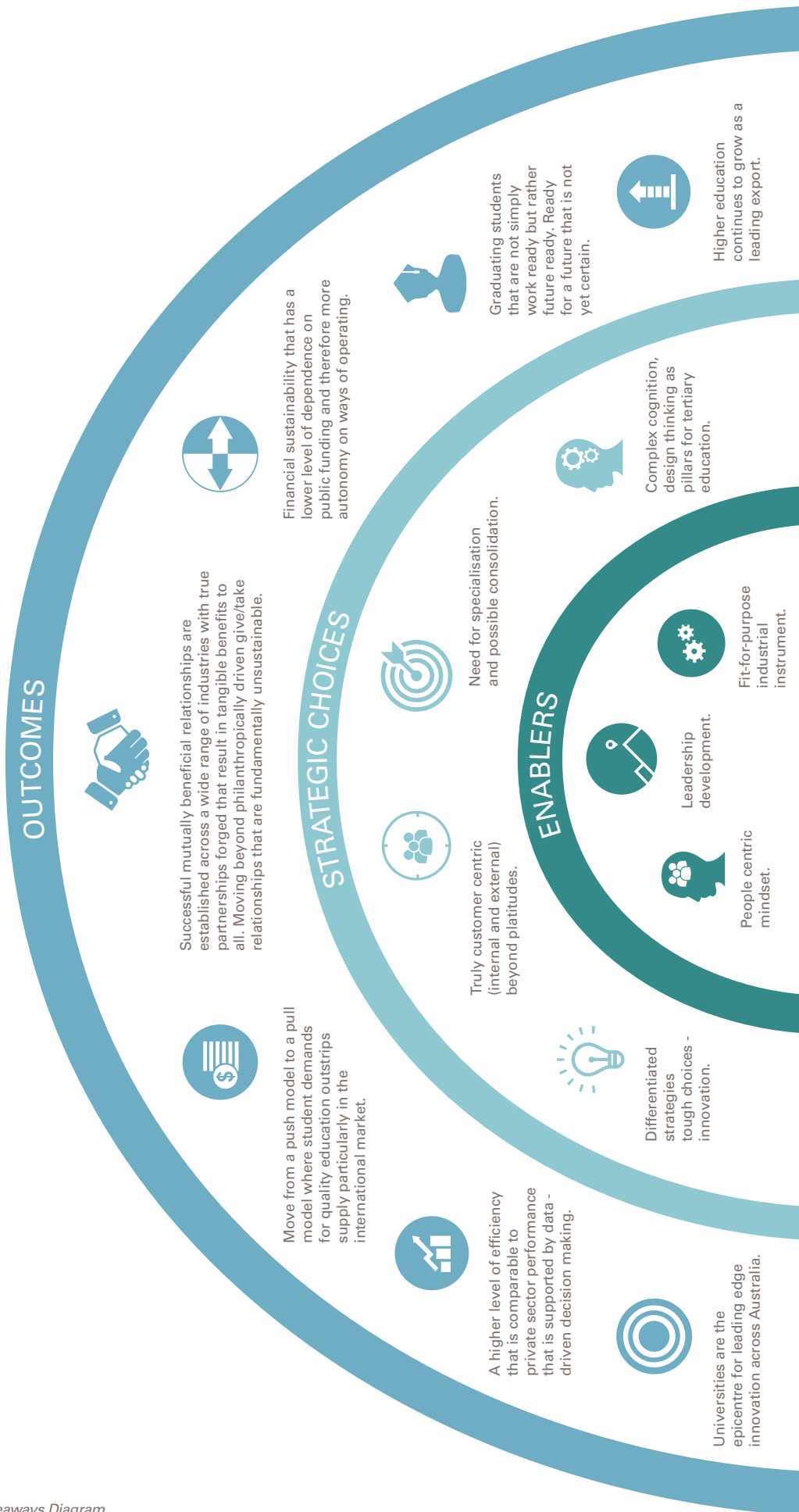


Figure 8. Key Takeaways Diagram

Appendix 1

Key leaders who participated in the research:



Dr Stephen Weller - Chief Operating Officer and Deputy Vice-Chancellor



Professor Andrew Vann - Vice-Chancellor and President



Jenny Robertson - Director, Human Resources



Professor Colin J Stirling – Vice-Chancellor

Steve Barrett - Director, People and Culture



Fiona Reed - Executive Director, Human Resources



Nicole Gower – Director, Human Resources



Professor Caroline McMillen – Vice-Chancellor

Nat McGregor - Chief Operating Officer



Nicole Bunning - Director, Human Resources



David Ward - Vice-President, Human Resources



Dr Andrew J. Smith - Vice-President (Students)

Rita Cincotta - Vice-President (People and Culture)



Professor Paul Wellings – Vice-Chancellor



Professor Stuart McCutcheon - Vice-Chancellor



Professor Barney Glover - Vice-Chancellor and President

Susan Hudson – Director, HR Strategy and Services

Professor Denise Kirkpatrick - Deputy Vice-Chancellor
and Vice-President (Academic)

Appendix 2

VICE-CHANCELLORS INTERVIEW QUESTIONS - THE UNIVERSITY FOR THE FUTURE

1. If you had a magic wand, what are three things you would change about the higher education sector in Australia and why?
2. In your view, is the sector in need of significant change and transformation to enable it to be future ready?
3. The University for the Future seems to be inextricably linked to the configuration of a funding model. As you look into the future, how will universities derive and utilise alternative funding streams to further grow and thrive in a more competitive environment?
4. The challenge for universities seems not to be the need to transform; but rather what to transform into and by what process. As you look to the next 5-10 years, what are some of the elements of the transformed institution in the Australian context? What do you see as the capability gaps to get us there?
5. Do we have too many universities?
6. What does the student of the future need from a university?
7. Workforce reform seems to be a critical part of the transformation process. In your view what needs to change in this arena? And how might we go about that change?
8. What is the role of academic leadership in the transformation process and are we ready?

HUMAN RESOURCES DIRECTORS INTERVIEW QUESTIONS - THE UNIVERSITY FOR THE FUTUTRE

1. If you had a magic wand, what are three things you would change about the higher education sector in Australia and why?
2. In your view, is the sector in need of significant change and transformation to enable it to be future ready?
3. The challenge for universities seems not to be the need to transform; but rather what to transform into and by what process. As you look to the next 5-10 years, what are some of the elements of the transformed institution in the Australian context? What do you see as the capability gaps to get us there?
4. What does HR need to look like in the University for the Future?
5. Workforce reform seems to be a critical part of the transformation process. In your view, what needs to change in this arena? And how might we go about that change?
6. What is the role of academic leadership in the transformation process and are we ready?

CONTACT

GEORG HIRSCHI

DIRECTOR - COMMERCIAL & INNOVATION

P +61 2 9229 2117

Georg.Hirschi@lhh.com.au

DR ROD GUTIERREZ

DIRECTOR - HIGHER EDUCATION STRATEGY

P +61 2 9229 2177

Rod.Gutierrez@lhh.com.au