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Taking university teaching seriously

Andrew Norton



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Overview

Australia has national debates about the quality of teaching in our schools. We worry about who is recruited to teach, what qualifications they have, and how well their students learn. Teaching quality in universities has received much less attention. As higher education enrolments expand towards 40 per cent of young people, university teaching needs to be taken much more seriously.

Universities now enrol students who would once have gone straight into work or vocational education. About a quarter of students entering university on lower ATARs never complete their degree. By comparison, university drop-out rates for the most able school leavers are below 10 per cent. The time, talent, and money of a large group of students are going to waste.

Student surveys indicate whether students in Australian universities have conditions and experiences that are conducive to learning. Despite improvements since the 1990s, there is room to do better. Australian students rarely report being pushed to do their best work, are often not actively participating in classes, and have little interaction with academic staff outside of class.

Academics are typically appointed for their subject expertise, with much less attention given to their teaching skills. Most academics have no training in teaching or have taken only short courses. Universities outsource large amounts of teaching to casual staff. Many academics prefer research to teaching.

Better research does not necessarily lead to better teaching. Original empirical analysis conducted for this report investigated

the effect of research on teaching. It found that students in high-research departments have very similar experiences to students in low-research departments.

Teaching-only universities are occasionally proposed as a solution. But this report's findings suggest that removing research would not on its own solve the teaching problem. Departments that research less have not compensated by building specialisation in teaching. They have similar staffing profiles and practices to departments that research more.

While strong university leadership will ultimately drive quality improvements, government has a modest but important role. Among other things, it should continue to sponsor surveys of students' learning experiences. It should maintain a competitive student funding system, so students can leave courses with poor teaching.

This report recommends a new, cost-neutral scheme to hire 2,500 teaching-focused staff at all academic levels across twelve universities. Teaching-focused roles can better recruit, develop and recognise effective teachers. A critical mass of skilled university teachers would act as a circuit breaker to research dominance.

Universities have long required research qualifications, sought research talent, and promoted their most able researchers. Teaching-focused academics can help lead a university culture shift that will make teaching an equal partner with research.

Table of contents

Overview	1
1. The need to improve teaching and learning	5
2. Academics are not recruited to teach	16
3. Teacher development and support.....	20
4. Recognising effective teaching.....	26
5. Is research activity the problem?.....	30
6. Policies to improve teaching.....	40
7. Conclusion.....	54
8. Glossary.....	56
9. References	57

Figures

Figure 1: Offers to applicants with ATARs below 70, 2009-12.....	6
Figure 2: Course completion rate by ATAR by 2011 (2005 cohort)	6
Figure 3: Learning environments in Australia and USA, 2011	10
Figure 4: Per cent of student CEQ responses “satisfied” on the good teaching scale, 1995-2012 ..	14
Figure 5: Academic work function and employment relationship (full-time equivalent), 2011	17
Figure 6: Permanent academic staff by work function, 1991-2012	18
Figure 7: Teacher training, non-award, 2011	21
Figure 8: Advice or support received on teaching, 2011	23
Figure 9: Activities that are, and should be, valued in promotion, 2010.....	26
Figure 10: Academic staff by function and seniority, 2012	27
Figure 11: Summary of results from high and low-research groups	32
Figure 12: Results across four aspects of learning	33
Figure 13: Student engagement results	34
Figure 14: Skills development results.....	36
Figure 15: Work readiness results	37
Figure 16: Overall satisfaction results	37
Figure 17: Results by broad field of education	38

Tables

Table 1: Policy recommendations	53
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Boxes

Box 1: Criticisms of student engagement surveys	9
Box 2: Comparing Australia and the US	12
Box 3: Institutional leadership in top teaching colleges in the US	25
Box 4: Teaching-focused roles at the University of Queensland	29

1. The need to improve teaching and learning

For many years there has been public disquiet about teacher quality and student learning in schools. Despite occasional public complaints from students, academics and employers, universities have largely escaped these widespread concerns. But the public should be concerned about higher education teaching and learning.

Higher education is no longer the preserve of an academic elite. The world economy has shifted towards higher-skill jobs, making higher education a routine aspiration for young Australians. The government has decided that 40 per cent of them should achieve a bachelor degree or above. Accordingly, it lifted most previous constraints on how many students universities can enrol.

Inevitably, big enrolment increases mean taking applicants who are academically under-prepared by the standards of past 'elite' university education. As a result, many students admitted with relatively low school results never complete their degrees. Many of those who do graduate probably don't learn as much as they could.

1.1 The changing student population

Over the last 30 years, Australia has moved from an elite system of higher education to a 'mass' system. In 1982, only 12 per cent of 17 to 19 year olds were enrolled in higher education. By 2010 that proportion more than doubled, to 26 per cent.¹ Australian higher education is in an expansionary phase, following the removal of previous limits on student numbers in public universities. The number of government-supported places has grown by nearly a quarter since 2009, driving towards the target of 40 per cent of people aged between 25 and 34 years holding a bachelor degree or higher.²

As a result, universities take students who would not previously have gone on to higher education. Figure 1 shows university offers by the Australian Tertiary Admission Rank (ATAR) of applicants between 2009 and 2013. ATAR ranks students in their age group according to their school results, with lower numbers indicating lower ranks. Below 70 offers increased by more than 40 per cent as the enrolment caps were removed. While this group still receives less than 30 per cent of all offers to Year 12 applicants, their share is growing.

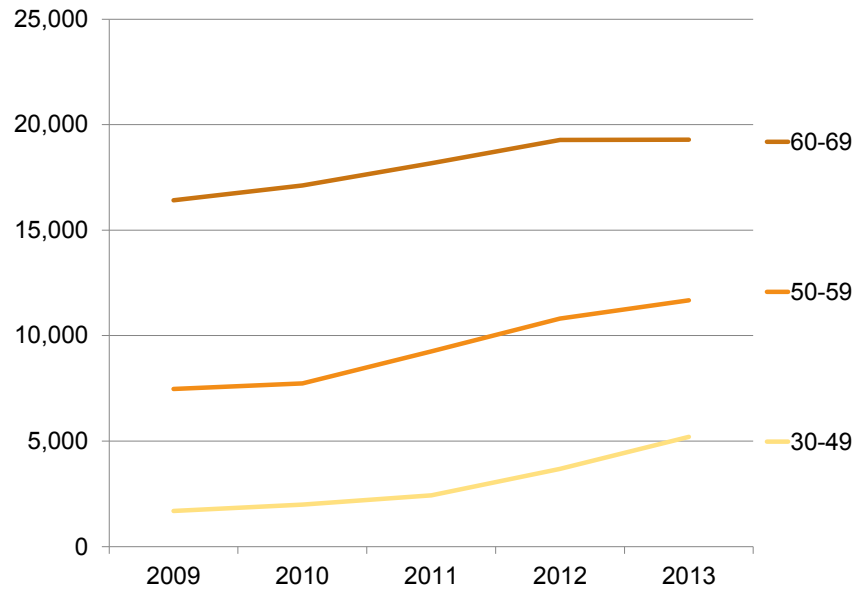
Academically able and self-motivated students can perhaps make up for mediocre teaching with their own efforts. As figure 2 shows,

¹ Norton (2013a), p. 23

² The target was set in DEEWR (2009). The current proportion is 37 per cent if adult migrants are counted, or 30 per cent for people raised in Australia: ABS (2013)

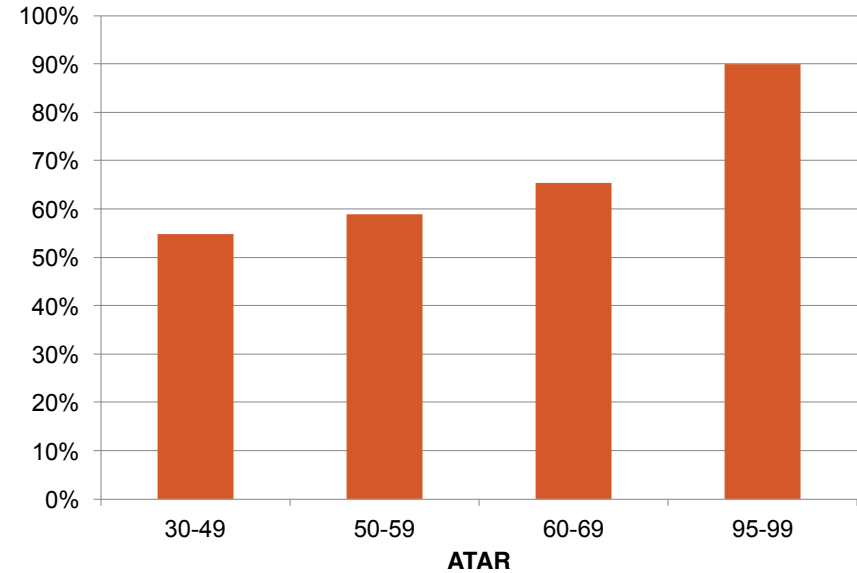
90 per cent of students with high ATARs completed a degree within seven years of commencing. But we can be far less confident of success for students with weaker academic backgrounds. For students with ATARs of 70 or below, less than two-thirds completed a degree in seven years. Some are still enrolled, but a quarter or more left without receiving a qualification. Quality teaching is one of the factors needed to make mass higher education a good investment, for students and taxpayers.

Figure 1: Offers to applicants with ATARs below 70, 2009-12



Source: DIICCSRTE (2013a) and predecessor publications

Figure 2: Course completion rate by ATAR by 2011 (2005 cohort)



Source: DIICCSRTE, on request from Grattan.

1.2 The skills graduates and Australia need

Some students are happy just to pass. But limited learning has broader economic consequences. Australia needs a high-skill workforce, including university-educated professionals who can respond effectively to economic, social and technical change. Along with discipline or industry-specific skills and knowledge, employers want graduates with a range of other job-relevant personal attributes.

There are concerns in Australia, and worldwide, that graduates do not have the skills to be successful in their careers.³ A 2012 Australian survey of more than 500 companies found that only 60 per cent of them were satisfied with graduates' literacy and numeracy levels.⁴ A large nationwide employer survey in 2007 found general satisfaction with graduates' technical or discipline-specific skills, but revealed concerns about communication skills and ability to apply knowledge in real settings.⁵ Another national survey shows that the most important selection criteria for employers when recruiting graduates are (in order): interpersonal, oral and written communication skills; drive and attitude; critical reasoning and analytical skills; academic calibre; and work experience.⁶

1.3 What is quality learning in higher education?

Around the world, higher education learning is evaluated locally. Academics set and grade their own assessment exercises. Students sometimes also face independent professional admission tests. There are no widely used standardised outcomes tests such as NAPLAN in Australian schools, or the OECD's worldwide PISA tests of reading, maths and science.⁷

³ Shah and Nair (2011)

⁴ Australian Industry Group (2013), p. 5. Survey included companies from all sectors but with an emphasis on manufacturing and construction.

⁵ DEST (2007)

⁶ GCA (2012b)

⁷ Plans to use the American Collegiate Learning Assessment test as part of national higher education performance indicators were abandoned on the recommendation of an expert working group: O'Connor (2012). There is also an OECD project to compare both generic and discipline-specific higher education

While we lack outcome measures that are comparable between universities or over time, a lot is known about the process of learning in higher education. Decades of evidence show a number of common factors that contribute to student success.⁸ They can guide us as to whether effective learning is likely to be occurring.

Student engagement is central to effective educational practice in higher education.⁹ Unlike school education, higher education requires students to undertake a substantial amount of self-directed activity. The time, energy and effort that they devote to their studies significantly influences how well they do. Teachers and universities need to help students engage with learning.

This task is more complex today than before. Mass higher education means teachers and universities now need to engage a more diverse range of students in high-level conceptual change. Where students are less academic, teachers need to organise the learning environment so that these students actively participate.

*Good teaching is getting most students to use the higher cognitive level processes that the more academic students use spontaneously.*¹⁰

What can universities and teachers do to improve student engagement? First and foremost, teaching should be student-

outcomes across countries. However, it is at an early stage: Tremblay, *et al.* (2012).

⁸ Biggs (2012), Kuh (2009), Pascarella and Terenzini (2005), Devlin and Samarawickrema (2010); Coates (2006)

⁹ Kuh, *et al.* (2004), Coates (2006)

¹⁰ Biggs (2012), p. 41

centred. This means focusing on individual student needs, what works best for them, and adapting teaching accordingly. Effective teaching motivates all students to actively participate in learning, so that they question, reflect on, discuss and apply new concepts and theories. Teachers need to challenge students academically and set high expectations, so that students do not simply pass with minimal effort. The more students practise and get feedback on their writing, analysing, or problem solving, the more adept they should become.¹¹

Students learn from their peers as well as their teachers. Constructing knowledge by working with others – in small group activities or group assignments, for example – can help develop higher-order cognitive skills.¹² A significant amount of learning also occurs outside of the classroom. Academic interactions with staff and peers in various contexts can have positive effects. High quality institutions provide supportive conditions for a rich educational learning environment across the campus.

Of course, what constitutes quality learning varies by subject. In business, for example, it may be important for the course to relate theory to practice, with a practical curriculum. Other disciplines, such as science, may place a high value on exposing students to active research and generating new research ideas.

¹¹ Kuh, *et al.* (2004)

¹² However, there is also evidence that more hours spent studying alone better predict higher results on a generic academic skills test than more hours studying with others: Arum and Roksa (2011), p. 100-101

1.4 Assessing Australian performance

Assessing the quality of learning in Australian universities is inherently difficult. This issue is debated within the sector and internationally.¹³ While many agree that engaged students make better learners, views differ on exactly what engagement means, and which methods and indicators should be used.¹⁴ Opinions also diverge on who is best placed to judge quality. Should it be students themselves, teachers, experts, employers, or a combination of all? In addition, Australian higher education appears to be of patchy quality, with variations between and within universities, making generalisations difficult.

A number of major Australian reviews have made progress towards an agreed approach to measuring quality.¹⁵ A 2008 review suggested a diverse set of national measures, in particular student satisfaction, employer satisfaction, student learning outcomes and graduate competencies.¹⁶

A comprehensive review of Australia's performance in teaching and learning is beyond the scope of this report. This chapter provides an overview of student engagement survey responses. Student engagement measures are widely used as quality indicators in Australia, NZ, Canada, the US and many other countries. While these surveys have limitations (discussed in box 1), they are a useful guide to current practices. To give a balanced picture, we present student and teacher perspectives.

¹³ Chalmers (2007)

¹⁴ Coates (2006), Hagel, *et al.* (2013)

¹⁵ Chalmers (2008); Coates (2010)

¹⁶ Chalmers (2008)

We compare Australia's performance to the US, taking into account differences in context and culture.

Student engagement surveys

Our report shows findings from the two main student engagement surveys in Australia: the Australasian Survey of Student Engagement (AUSSE) of first and later-year students, and the Course Experience Questionnaire (CEQ), which is sent to people who have recently completed a degree. In this analysis, we use the 2011 AUSSE survey of later year students. We compare overlapping questions in the AUSSE and in the North American National Survey of National Engagement (NSSE).

We also assess Australian academic staff responses on student engagement measures using the Staff Student Engagement Survey (SSES), which complements the AUSSE. We compare our findings to American teacher views, using the US Faculty Survey of Student Engagement (FSSE), which complements the NSSE.

Box 1: Criticisms of student engagement surveys

The AUSSE and NSSE both focus on whether students engage in practices known to contribute to learning success. While both surveys are based on extensive research, some question their predictive capacity.¹⁷ A number of recent studies confirm the survey's capacity to predict what makes for good learning.¹⁸ The AUSSE and NSSE are also criticised for not adequately capturing the complex, multi-faceted nature of student learning.¹⁹ It is true that they may not tell us everything we would like to know. But it is a problem if significant numbers of students say that they are not challenged or engaged. There are also concerns that the AUSSE questions are too US-focused, especially in its personal development questions.²⁰ This report gives much more weight to learning-related rather than personal development questions. A final issue is whether student self-reports can accurately assess learning outcomes and contexts. Self-reports on learning are reliable under certain conditions, which apply to AUSSE.²¹ Further, many AUSSE questions focus on what students do rather than subjective opinions.²²

¹⁷ Hagel, *et al.* (2013)

¹⁸ Pascarella, *et al.* (2010), Kuh, *et al.* (2008)

¹⁹ Hagel, *et al.* (2013)

²⁰ *Ibid.*

²¹ Carini, *et al.* (2006) cites a number of conditions, such as when the information requested is known to students, the questions are clear and unambiguous, and refer to recent activities.

²² For example, the AUSSE asks "how often did you receive teacher feedback?", rather than asking "how good was your teacher at giving feedback?" This focus reduces the scope for student bias or misjudgement.

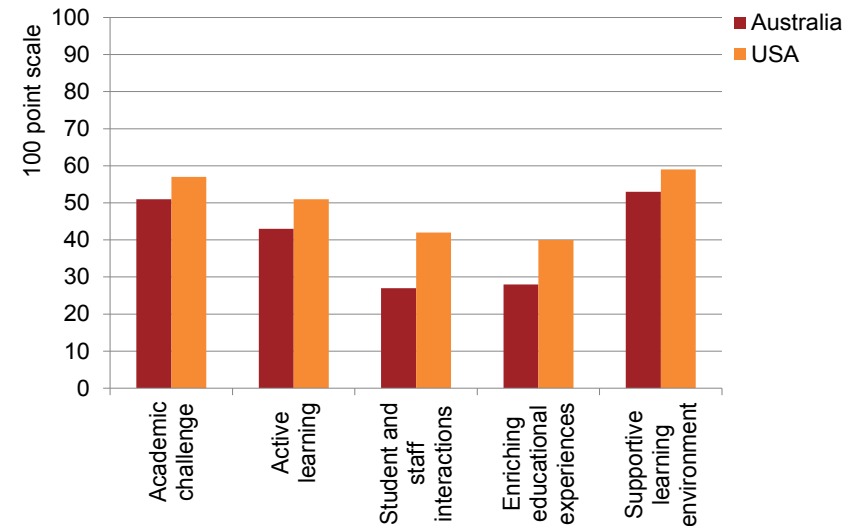
Survey findings

The AUSSE clusters related questions into groups to explore different aspects of the student experience, such as the level of academic challenge or how students and staff interact. These summary measures are described as ‘scales’. Student responses are given points, where the least positive response option is given a 0 and the most positive response option is given a 100. Higher scores indicate that the student experience is more conducive to learning.²³

Australian students show weak to moderate positive responses across all student engagement measures in the AUSSE, as figure 3 shows.²⁴ Average Australian student responses to the scales range between 27 and 53, and are especially low on student and staff interactions and enriching educational experiences.

How does this compare internationally? Australian students have less positive responses across all engagement measures than do their American counterparts, as figure 3 shows. However, cross-country comparisons with the AUSSE must be made cautiously (discussed in box 2).²⁵

Figure 3: Learning environments in Australia and USA, 2011



Source: ACER (2011a)

Note: Later-year students only. The scales are constructed by first calculating 0-100 scores for each question, giving the least positive response 0 and the most responsive 100. The questions in each scale are then averaged to produce the overall scale score.

Active learning

The active learning scale is based on evidence that students learn more when they actively participate in classes and interact with others on academic work outside the classroom. Overall, Australian students score on average 43 on the 100 point scale. The majority of Australian students do not ask many questions in class; only 25 per cent say they do so “very often.” There are also low levels of peer interaction; more than 40 per cent report that

²³ For information on how the AUSSE was developed, see Coates (2009).

²⁴ This section reports the responses of later-year students, which are generally better than for first-year students. All responses are from ACER (2011a).

²⁵ Brogt and Comer (2013)

they “never” or only “sometimes” work with other students.

American students on average score 8 points higher (51) than Australian students on active learning. Americans are much more likely to ask questions in class: 40 per cent say they do so “very often”, compared to 25 per cent of Australians. US teacher responses confirm this finding, with 55 per cent of American teachers spending at least one-fifth of class time in teacher-led discussion, compared to only 45 per cent of Australian teachers. Knowing that your lecturer may call on you to answer questions in class can be a good motivation to work hard.

Student and staff interaction

Interactions between students and staff can boost student learning. These encounters can help a student to feel academically supported, and therefore to persist in study and seek academic success.²⁶ Yet Australian students report low levels of interaction with teachers, scoring an average of only 27 out of a possible 100 points, much less than American students on 42 points. This is the largest difference between the two student groups.

Forty per cent of Australian students never discuss ideas or readings from their classes with staff outside the classroom, compared to 30 per cent of American students. While 60 per cent of US students report “often” or “very often” discussing grades or assignments with staff, only 27 per cent of Australian students do so.

²⁶ ACER (2011d)

Low levels of student and staff interaction are more of a concern as higher education expands. Less academically prepared students, who typically need the greatest levels of support, are especially likely to be affected by limited access to university staff.

Enriching educational experiences

Broader educational experiences are important in developing rounded human beings. They include activities such as community service, volunteering, and interacting with people from different cultures. Australian students rate the quality of their enriching educational experiences as very low, at an average of 28, significantly less than the rating of 40 in the US.

US teacher responses indicate they strongly expect students to participate in campus life. Almost half of American academics surveyed thought that students should spend more than five hours a week in extra-curricular activities. Only a quarter of Australian academics agreed.

Supportive learning environment

The supportive learning environment scale covers relationships among students, and between students and staff. Most students in Australia and the US rate their student peers as friendly, and only small minorities in each give their teachers very low ratings for their availability, helpfulness, and sympathy. Along with academic challenge, this scale produces the smallest gap between American and Australian students (59 to 53).

Work-integrated learning

The AUSSE work-integrated learning scale shows that the majority of Australian students do not often blend academic and work-integrated learning. More than 60 per cent had not undertaken an industry placement or work experience. This matches concerns from industry that learning should be more connected with practice.²⁷ There is no equivalent US scale.

Student satisfaction

Overall, Australian students today are moderately satisfied with their learning experience. Of later-year Australian students, only 26 per cent rate their educational experience as “excellent.” About one in five Australian students believes his or her education is “fair” or “poor.”

American students report higher levels of satisfaction with their learning experience: 40 per cent rate it as excellent compared to 26 per cent of Australians. Despite this, many people in the US believe their system is not good enough. A much-discussed study argued that a substantial minority of students were not improving significantly on a range of thinking, reasoning and writing skills.²⁸ Even elite institutions such as Harvard and Stanford are re-vamping their MBA programs to make them more relevant to student needs.²⁹

Box 2: Comparing Australia and the US

Australian and American student engagement results should be compared carefully. Ideally, we need to distinguish between results caused by factors we do not aim to replicate in Australia, and those that are relevant to Australian universities.

For example, high American participation in extra-curricular activities may be explained by an explicit focus on personal and moral development in the US that is largely absent in Australia. This goal is helped by high rates of living on campus in the US.

On the academic challenge scale, American students may believe they are working harder as there is less consistency in pre-college preparation.³⁰ American students may therefore find the transition to first year more challenging, regardless of any real differences in teaching approaches. Our analysis in this chapter avoids this issue by comparing later-year students only.

However, differences may also be due to the different ways in which American colleges and universities organise themselves. A typical US university curriculum requires the completion of 40 subjects over four years for a bachelor’s degree. This compares to 24 subjects in Australia – four per semester over three years. University semesters run for 16 weeks in America, compared to 12 in Australia.³¹

²⁷ DEST (2007)

²⁸ Arum and Roksa (2011)

²⁹ Datar and Garvin (2011)

³⁰ Brogt and Comer (2013) find that US students are likely to be less prepared as there is (1) less consistency in educational attainment prior to university, (2) less schooling (only 12 years), and (3) poorer school outcomes on OECD tests.

³¹ Ibid.

1.5 Academic attitudes towards teaching

Student engagement surveys show differences in teaching and learning behavior between Australia and the US. Does this reflect deeper differences in staff attitudes toward teaching?

Unfortunately there are no directly comparable international studies of academic attitudes. We can only contrast questions on similar themes.

In Australia, an estimated 64 per cent of academics in combined teaching-research roles say they lean towards, or are primarily interested in, research. Only 35 per cent indicate they prefer teaching.³² This is concerning given that teaching-research academics make up most permanent academics involved in teaching. Teaching-only academics mostly (74 per cent) prefer teaching.

The next generation of Australian academics shows a clear interest in research rather than teaching. In a nationwide survey of more than 11,000 research students wanting to pursue an academic career, only 37 per cent indicated that teaching was a “very attractive” part of this career choice. By contrast, nearly 60 per cent indicated that research was “very attractive.”³³

A Higher Education Research Institute (HERI) survey gives some insight into the attitudes of American academics who teach undergraduate students. They place great emphasis on their role as teachers. Seventy per cent of American academics consider

teaching to be their “principal activity” at their current institution.³⁴ Almost all (97 per cent) American academics consider teaching to be “personally essential or very important.”³⁵ This was higher than the number of academics (82 per cent) who considered research to be “personally essential or very important.”³⁶ Further, most staff (82 per cent) think faculty are interested in the academic development of students, and very few (7 per cent) think that students are treated “like numbers in a book.”³⁷

These results may reflect the different structure of the American higher education system, which has a large number of teaching-focused colleges.³⁸ American academics at these institutions may see their “primary roles” as teachers because research activity is modest or non-existent. In Australia, public teaching-focused institutions were largely abolished as a result of reforms in the late 1980s and early 1990s. The remaining mostly private institutions educate less than 7 per cent of higher education students.³⁹

Academic staff morale also appears higher in the US than in Australia. American academics are more satisfied overall with their work. Almost three-quarters of American academics are “satisfied” or “very satisfied” with their “overall job satisfaction.”⁴⁰

³² Bexley, *et al.* (2011), p. 15. This statistic excludes research-only and postdoctoral staff.

³³ Edwards, *et al.* (2011), p. 34

³⁴ Hurtado, *et al.* (2012), p. 19

³⁵ *Ibid.*, p. 20

³⁶ *Ibid.*, p. 20

³⁷ *Ibid.*, p. 30

³⁸ Carnegie Foundation (2013)

³⁹ DIICCSRTE (2013b)

⁴⁰ Hurtado, *et al.* (2012), p. 31

In contrast, only 56 per cent of Australian academics agree that “generally speaking, I am satisfied with my job.”⁴¹

1.6 Improved teaching quality over time

We know that Australian student engagement is low, especially when compared to the US. But has Australia improved with time? The Course Experience Questionnaire has been conducted since the early 1990s and gives historic trend data. Core questions cover teaching, generic skills, and overall satisfaction. Figure 4 shows results on the CEQ’s “good teaching scale.” The scale includes questions on the level and helpfulness of feedback, teaching staff effort and effectiveness, whether students were motivated by teaching staff, and whether teaching staff made an effort to understand difficulties students were having.

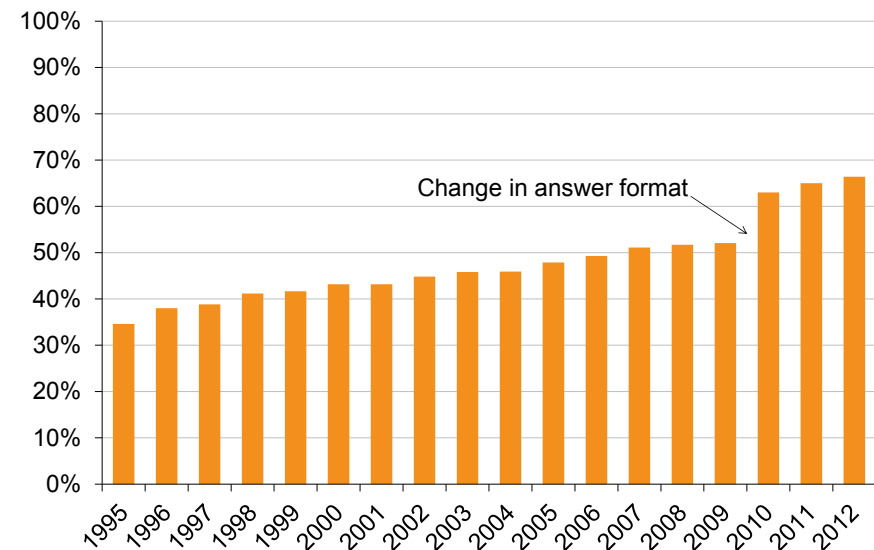
As figure 4 shows, over time students have become more positive about teaching. Although the trend is favourable, it was not until 2007 that a majority of graduates were satisfied with teaching. In 2010, the good teaching scale result jumped from 52 per cent to 62 per cent, though a change in the response options is likely to be a major factor explaining this increase, rather than a genuinely large improvement in teaching quality.⁴² The good teaching scale

⁴¹ Bexley, *et al.* (2011)

⁴² A mid-point in a five-point scale, which had previously been unlabelled, was described as “neither agree nor disagree” with the proposition being offered (for example, “the staff put a lot of time into commenting on my work.”) Possibly this means that satisfaction using the top two point definition was understated for previous years. However, CEQ respondents may have interpreted “neither agree nor disagree” as meaning they have no opinion, while they could have interpreted the unmarked mid-point as representing a view, such as ‘middling’ or ‘mediocre’ but not unsatisfactory.

results vary significantly between disciplines. In 2012, the range was from 50 per cent average agreement for mechanical engineering, to 78 per cent average agreement for history.⁴³

Figure 4: Per cent of student CEQ responses “satisfied” on the good teaching scale, 1995-2012



Source: GCA (1997-2013)

Note: A student is interpreted as satisfied if they chose one of the top two points on a five-point scale. They are interpreted as dissatisfied if they choose on the lower two points on the scale. The overall good teaching scale averages student responses to six questions.

⁴³ GCA (2013), p. 11

Of the various CEQ good teaching scale questions, the best result was on feedback, with 73 per cent of 2012 respondents agreeing that teaching staff normally gave them helpful feedback. The worst result was on staff making a real effort to understand student difficulties with their work, with 56 per cent agreement.⁴⁴ Typically, around 10 per cent of graduates expressed dissatisfaction on each question, with another 20 per cent offering a neutral view.

1.7 Why hasn't teaching and learning been better?

Universities have been slow to make higher education teaching a profession. Traditional professions such as law, accounting or medicine have entry requirements, clearly-defined practice standards, ongoing professional development obligations, and procedures for expelling people who breach the rules. University research is a profession. Academics need a research degree for admission. They use peer review and other quality mechanisms to maintain standards. While there is no licence to operate as an academic that can be revoked, increasingly universities terminate the careers of under-performing researchers. But for university teaching, as subsequent chapters will show, the practices and norms of professionalisation are still emerging.

The deeper question is why teaching hasn't been professionalised. A full answer is outside the scope of this report. But we can say that historically universities have faced little pressure to improve their teaching. Governments took a 'hands off' approach to academic matters, respecting academic freedom. They insulated universities from market forces, and did little to

inform themselves or students of university teaching performance. Government gave universities more financial incentives to improve their research than their teaching. Within universities, academics had significant power. They were often well-represented on university governing bodies. If academic norms on teaching were not emerging spontaneously, there were few levers for imposing better practices.

⁴⁴ GCA (2013), p. 7

2. Academics are not recruited to teach

Recruiting the right people as university teachers is important. There is clear evidence that effective teachers adopt particular practices linked to improved learning.⁴⁵ Teachers who are motivated to teach are also more likely to be effective.⁴⁶ Teacher enthusiasm is known to influence students' cognitive development and behaviour.⁴⁷

Yet university recruitment focuses more on research performance than on teaching skills. Universities are multi-purpose organisations that employ most ongoing staff in combined teaching-research roles. Hiring effective teachers is less important than securing talented researchers who can boost research results. Academics typically prefer research to teaching and government funding directly rewards strong research performance.

Changing the way academics are recruited can improve teaching in Australian universities. New selection criteria can help bring into universities people who want to teach and are good at it. Recruitment is an area of teaching performance that has received relatively little university or policy attention.

2.1 Teacher training and experience are not essential

Universities send strong signals to aspiring career academics about what is valued from the time they join the profession. Initial

teaching training is often irrelevant to securing a first academic job. A 2010 survey asked university leaders what factors are most important when recruiting recent research graduates.⁴⁸ By far the most important factor was refereed journal articles or books, followed by a track record of winning grants. Just over half the respondents saw experience in teaching as important. A formal qualification in university teaching was not seen as being very important. The survey report suggests that;

...supervisors encourage [research] students to focus on the development of their research skills and this may be because supervisors are aware of the greater emphasis placed on research experience in recruitment practices.⁴⁹

Most ongoing academic jobs in universities require a research degree, typically a PhD. About two-thirds of academic staff have a PhD.⁵⁰ Sessional staff are usually only employed to teach, but their qualifications are also skewed towards research. Many of them have research credentials. About half are current research students, usually at PhD level.⁵¹

This method of recruitment is widespread internationally. Even in the US, where student engagement results are higher than in Australia, recruitment decisions are skewed toward research. A recent US study on political science faculties shows that whether

⁴⁵ Chalmers (2008), Pascarella and Terenzini (2005)

⁴⁶ Feldman (2007)

⁴⁷ Rosenshine (1970), Bettencourt, *et al.* (1983)

⁴⁸ Edwards, *et al.* (2011), p. 81

⁴⁹ *Ibid.*

⁵⁰ DIICCSRTE (2012a), calculated from table 4.1

⁵¹ Bexley, *et al.* (2011), p. 38

a job applicant had completed a graduate training program in teaching did not influence hiring decisions in teaching institutions.⁵² The excerpt below highlights a Canadian example of difficulties some excellent teachers face in maintaining ongoing employment.

Last year...a popular instructor with the School of Business, [at Carleton University], didn't have his term contract as a full-time lecturer renewed. The university argued that the business school's accreditation, funding and reputation hinges on its research capacity, and that when funding for a full-time tenure-track position became available, it had to concentrate on hiring a professor with a track record in research as well as teaching. Despite his [the instructor's] teaching talents, [he] doesn't have a PhD. Hundreds of students signed a petition to have him reinstated. He accepted a contract to teach two courses this academic year.⁵³

2.2 Many teachers are temporary employees

Most academic staff employed only to teach do not have ongoing employment, as figure 5 shows. They are instead employed on a casual or sessional basis.⁵⁴ A headcount study using superannuation records suggests that more than half of all academic staff are sessional.⁵⁵ On a full-time equivalent basis, there are about 10,000 sessional teachers, or around a quarter of all staff with a teaching or teaching and research function.

⁵² Ishiyama, *et al.* (2013)

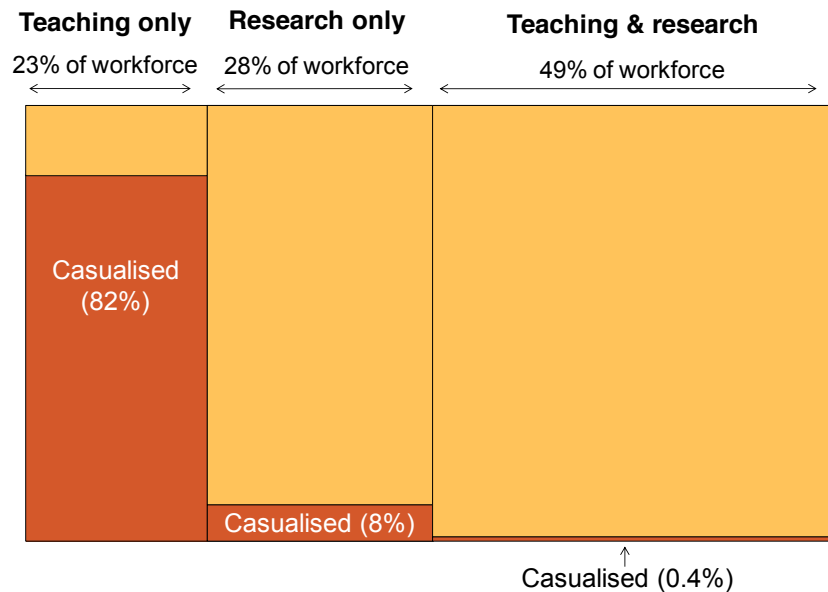
⁵³ Farr (2008)

⁵⁴ Calculated from DIICCSRTE (2012b), appendix tables 1.6 and 1.7.

⁵⁵ May (2011), p. 6

Sessional and casual positions can benefit students. They bring into universities people who do not want academic careers but have valuable knowledge and experience. But current numbers of non-permanent staff are beyond desirable levels. Universities have little incentive to invest in the longer-term development of a large proportion of their teaching staff.

Figure 5: Academic work function and employment relationship (full-time equivalent), 2011

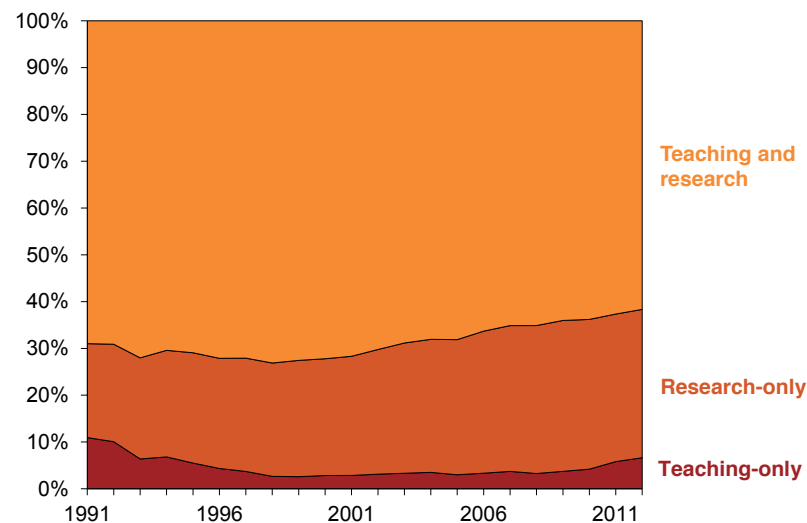


Source: DIICCSRTE (2012b), Appendix 1

Figure 6 shows the trend in ongoing positions since the 1990s. Most specialised staff are researchers, with an upward trend since

the 1990s. The large number of specialised researchers compared to specialised teachers again highlights the relative importance of research. Despite recent increases in ongoing teaching-only positions, these remain a tiny minority of all ongoing academic jobs.

Figure 6: Permanent academic staff by work function, 1991-2012



Source: DETYA (2000), DIICSRTE (2012b)

2.3 The best teachers are not always recruited to teaching-only roles

Universities should have a culture that seeks the best-qualified applicants for teaching-only positions. While some universities take teaching-only academic jobs seriously, these jobs are also a way to manage staff whose research performance is unsatisfactory.⁵⁶ This reinforces an impression that teaching lacks status.

Further, teaching-only roles have also been used to meet enterprise bargaining commitments to convert casual teaching staff to ongoing positions. While teaching-only roles are too casualised, simply switching existing casual staff into permanent staff does not ensure the best teachers are appointed. Recruiting academics who are skilled at teaching is more likely to improve student learning.

2.4 Industry experience not valued in hiring process

There have been calls for the Australian higher education sector to connect more closely to industry in order to address students' work readiness and employability skills.⁵⁷ At present, academic recruitment devalues prior or concurrent professional practice. Especially in disciplines leading to specific vocations, there could be many people who would like to combine teaching and professional practice. Few universities advertise externally for positions involving teaching, which limits the potential talent

⁵⁶ Probert (2013), p. 31, 35

⁵⁷ BIHECC (2007)

pool.⁵⁸ People who could be successful teachers have only limited opportunities to enter academia, unless they also have a research track record.

While teachers in the vocational education sector have both education and industry skills, it remains rare in higher education.⁵⁹ The current academic workforce has little experience in industry. A 2007 survey of academic staff with ongoing appointments found that only 9 per cent were employed outside academia, divided roughly equally between business and government or not-for-profit organisations.⁶⁰ Even among sessional staff, only 18 per cent earn most of their income from employment outside the university sector.⁶¹

While industry experts are used in university curriculum design, overseeing work placements, and as guest lecturers, they are less commonly appointed to ongoing teaching positions. This may in part be because university-level teaching requires an understanding of theory as well as practice. To become full-time teachers, industry experts would need to develop their theoretical knowledge, as well as (like much of the existing academic workforce) their teaching skills.

⁵⁸ Probert (2013), p. 30

⁵⁹ Productivity Commission (2011)

⁶⁰ Changing Academic Profession Survey 2007. Data provided by Peter Bentley.

⁶¹ Strachan, *et al.* (2012), p. 75

3. Teacher development and support

Historically, academics have had little or no preparation for teaching. They were simply expected to develop into their teaching roles through trial and error, with limited support. Staff relied on deep subject matter knowledge to design curriculum and transmit knowledge to students.

This was never satisfactory, but it is even less so today. The student population's increasing diversity and technology-based learning make teaching a more complex task. Staff need a sound understanding of learning theories and how to apply them in their work. Teachers must meet varied demands for quality from the university, students, employers and government.⁶²

Good teaching skills and capabilities are not innate. Teachers need ongoing opportunities to develop and improve their practice.

*Excellent teachers are made, not born; they become excellent through investment in their teaching abilities. Leaving teachers to learn from trial and error is a waste of time, effort and university resources.*⁶³

It is ironic that the very institutions that exist to provide training for key professions do not yet require similar standards for their own staff. It seems unlikely this practice can continue over the longer-term.

⁶² Devlin and Samarawickrema (2010)

⁶³ Pleschová, *et al.* (2012), p. 6

3.1 International shift toward teacher development

A wide variety of university teacher development initiatives have now been implemented world-wide. These include induction programs, mentoring, training programs, centres for teaching and learning, grants for innovation, support for new learning environments, student evaluations, teacher peer review, and benchmarking effective teaching practices.⁶⁴ Initial training of university teachers is now widely established in Norway, the UK and Finland.⁶⁵ Centres and networks have been created to implement teacher development courses, such as the Higher Education Academy in the UK.

Despite this trend, there are still international calls for a more systemic approach. Opportunities for development have largely been ad hoc and unevenly spread within countries. European countries are expected to increase their focus on professionalising university teaching in future.⁶⁶ Ireland recently launched a national strategy in higher education from 2011 to 2030, emphasising the ongoing professional development of teachers.⁶⁷

3.2 Teacher training

Simply increasing teacher training does not necessarily improve teaching quality. Programs need to be designed and implemented

⁶⁴ Hénard and Roseveare (2012)

⁶⁵ Postareff, *et al.* (2007)

⁶⁶ Pleschová, *et al.* (2012)

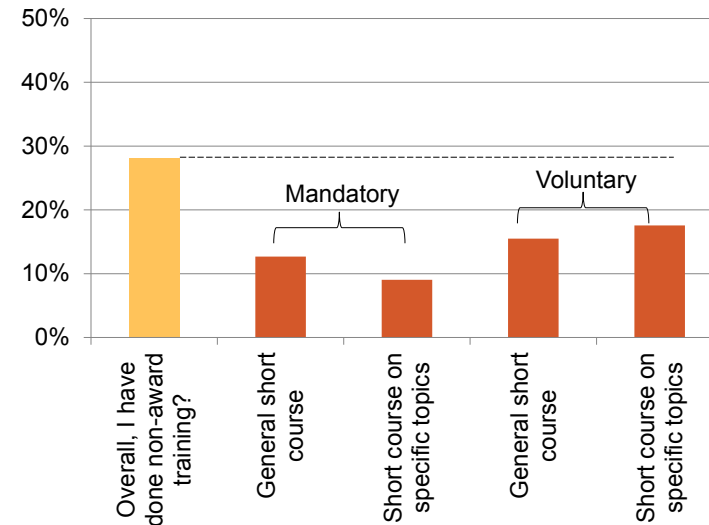
⁶⁷ Department of Education and Skills (Ireland) (2011)

around teacher needs. Teachers also need opportunities to apply what they have learned, which they may not get if they are too busy with other commitments.

While only a small body of evidence shows that training improves teaching effectiveness, this appears due to limited good research rather than to inconclusive findings. Several empirical studies clearly show positive changes in teacher approaches and behaviours after training.⁶⁸ A major Australian literature review concluded that opportunities for professional learning, development and teaching qualifications were relevant indicators of the quality of teacher training. How extensively a university adopted them reflected its attitude toward teacher preparation.⁶⁹

A 2010 survey of 20 Australian institutions estimates that nearly 40 per cent of academics have never undertaken any form of teacher training.⁷⁰ Other nationwide survey data shows that less than 30 per cent of the academic workforce has done a teaching short course, as figure 7 shows.⁷¹ This includes general short courses, such as inductions, as well as short courses on specific teaching topics such as assessment. Voluntary rather than mandatory short courses were more commonly undertaken.

Figure 7: Teacher training, non-award, 2011



Source: ACER (2011c)

While many Australian universities now offer a Graduate Certificate in University Teaching (or equivalent), few individuals have formal qualifications in how to teach.⁷² According to the 2010 survey of academics, less than 15 per cent of staff hold a degree in university teaching and less than 12 per cent have a general education qualification.⁷³ Further, the majority of academics (51 per cent of all survey respondents) indicated they

⁶⁸ Gibbs and Coffey (2004), Postareff, *et al.* (2007), Stes, *et al.* (2010)

⁶⁹ Chalmers (2007)

⁷⁰ Bexley, *et al.* (2011), p. 26

⁷¹ ACER (2011b), Grattan data request. A 2010 survey finds slightly higher results, with 36% of academic staff having completed a teaching short course (Bexley, *et al.* (2011), p. 26).

⁷² Edwards, *et al.* (2011)

⁷³ Bexley, *et al.* (2011), p. 26

would be very unlikely to consider taking a university teaching degree in future.

Academics who have done training generally find that it is useful. Favourable ratings ranged between 60 and 70 per cent, depending on the form of training. That includes general qualifications in teaching, short courses, as well as degrees in university teaching. Support for degrees in university teaching was slightly weaker than other forms of training, with 60 per cent finding them useful.⁷⁴

Given that Australian staff tend to develop skills outside of formal teaching qualifications, it is important these efforts receive adequate recognition in institutional structures. The Australian National University (ANU) has recently taken steps on this issue by signing up to the UK Higher Education Academy's (HEA) internationally recognised system of teaching standards.⁷⁵ The HEA's system works on graded fellowships, which staff members can obtain by presenting a portfolio of teaching achievements. This means that ANU can now identify when the achievements of their staff are at world standard.

3.3 Preparation of early career academics

The initial preparation of university teachers is weak not only in Australia but also internationally. Most early career academics have little teaching training in their doctoral degrees. The international Changing Academic Profession survey shows that during their doctoral degrees, 14 per cent of Australian academics

completed instructional skills courses or learned about teaching methods, compared to 34 per cent in US.⁷⁶

A large Australian survey of research students (PhD and masters) found that many were unaware of teacher training.⁷⁷ Research students who knew about training but did not take it generally gave "lack of time" as the key constraint. However, many expected to undertake training later in their careers. Time constraints often made short courses more attractive. Despite their lack of training, most research students who were teaching felt adequately prepared.

3.4 Teacher collaboration and education-related research

Effective teachers continuously explore what works and adapt their practices accordingly. Working collaboratively with other teachers and experts can help develop teaching skills. Teachers can receive feedback through mentoring, class observation, peer review and action research projects (where teachers investigate new methods, often in collaborative teams, developing solutions to common problems). In particular, teachers can learn from other teachers in the same faculty to improve discipline-specific pedagogical understanding – a key concept in higher education teaching.⁷⁸

Despite the benefits of collaboration, teachers in Australian universities appear to largely work in isolation. As figure 8 shows, less than 40 per cent of academics receive advice on teaching in

⁷⁴ *Ibid.*, p. 26

⁷⁵ ANU (2013)

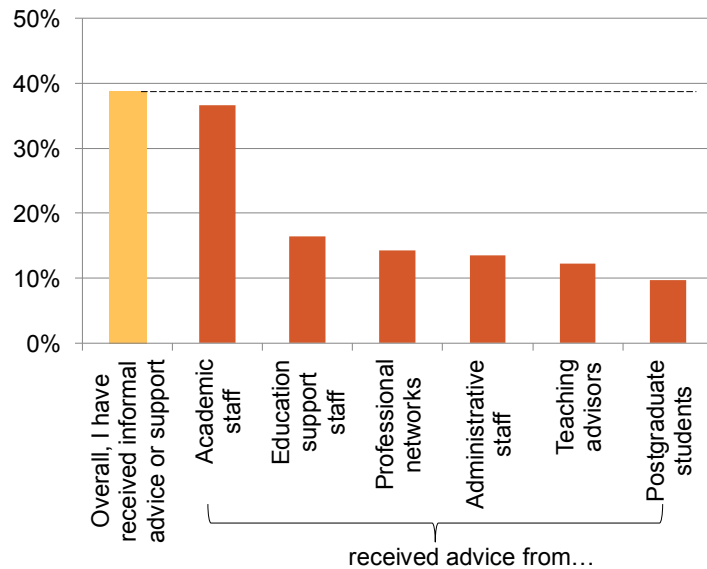
⁷⁶ Bennion and Locke (2010), p. 16

⁷⁷ Edwards, *et al.* (2011)

⁷⁸ Fry, *et al.* (2008)

2011. Of those that did receive advice, it came mostly from other academic staff. This is not a negative, as staff collaboration is an important source of development. Only a minority of the workforce received advice from professional networks (14 per cent) or teacher advisors (12 per cent).

Figure 8: Advice or support received on teaching, 2011



Source: ACER (2011c)

Another key form of teacher development is scholarly research into teaching and learning. The Commonwealth Government sponsors grants, fellowships and research funding for education-

related research projects. In 2013, \$10 million has been allocated to provide funding for academics and professional staff to investigate, develop and implement innovations in learning and teaching.⁷⁹

As well as government support, universities should provide time and resources for academics to do education-related research. However, there is limited data available on the extent of this institutional support.

3.5 Institutional leadership and support

Reviews across many countries have found that institutional commitment to quality teaching is critical to providing the time, resources and support for teacher development. An OECD review identified institutional support as vital for quality learning.⁸⁰ In a major study of the top teaching US universities, strong institutional leadership and support was an important success factor, as box 3 explains.

In Australia, a team from QUT, Deakin, Murdoch and Swinburne University documented key lessons about teaching and learning leadership in the Australian higher education sector.⁸¹ The team interviewed 24 leaders in university teaching, and surveyed 88 teachers, across 18 institutions. Academics were asked about the best ways a university could improve the quality of its teaching and learning. It found seven principles:

⁷⁹ Office for Learning & Teaching (2013)

⁸⁰ Hénard (2009)

⁸¹ Devlin, *et al.* (2012)

- Align efforts to improve the quality of teaching and learning with the university's strategic direction
- Provide executive support for improved teaching and learning, including allocating resources as part of the university's planning and budget cycle
- Reallocate staff workloads to allow time for innovation and improvement in teaching and learning
- Reconcile the competing needs of research and teaching
- Conduct relevant research and scholarship on effective teaching practice within and between institutions
- Centrally coordinate teaching and learning support structures that exist at the department or faculty level
- Establish mechanisms for professional development, reward, recognition and career pathways.⁸²

There is mixed evidence on how well these principles are reflected in university practices. A 2007 review of Australian universities found that while many had teaching and learning plans, almost half did not detail how teaching would be measured, who was responsible for the plan's success, or its timeframe.⁸³ Most indicators of learning and teaching quality were student level input and output measures, rather than learning outcomes.

⁸² Ibid.

⁸³ Chalmers and Thompson (2008)

Generally, the resources required to implement the plan were not listed.

A major 2008 review of 37 Australian universities found that most had established a teaching and learning centre, professional development centre, and/or an online portal with resources available to staff and students.⁸⁴ Many offered online support services for teachers, on online lesson plans, for example, as well as forums and seminars.

In Australia, heavy teaching workloads constrain teacher development. Already stretched individuals are unlikely to take on additional developmental opportunities. A 2010 survey found that more than half of mid- to late-career academics do not believe their overall workload is manageable.⁸⁵ Australian academics reported among the highest number of hours worked in universities around the world. Across teaching, research, service and administration, junior academics reported working 43.8 hours and senior academics 50.4 hours a week in 2007.⁸⁶ These hours are high compared to other sectors in Australia, where full-time employees worked an average 39.4 hours a week in 2007.⁸⁷

A recent Australian review emphasised the need for institutional leadership to free up time for teacher development.

The major factor inhibiting efforts to improve teaching and learning is high staff workloads and the consequent lack of

⁸⁴ Ibid.

⁸⁵ Bexley, *et al.* (2011) p. 32

⁸⁶ Coates, *et al.* (2009), p. 25

⁸⁷ Ibid. p. 27

time to engage with, and contribute to, teaching and learning enhancement efforts. If leaders in Australian universities wish to enhance teaching and learning, fresh thinking, policy and planning is needed around academic and professional staff roles and workload allocation.⁸⁸

Box 3: Institutional leadership in top teaching colleges in the US

Since 2002, the US 'DEEP project' has studied the effective practices of 20 four-year colleges and universities that performed well on student engagement and completion rates.⁸⁹ The types of institutions studied varied from small to large, selective to non-selective.

A key finding is that leadership on teaching quality is a critical determinant of success. This includes leadership at the top of the institution and at the faculty and departmental level. In the best teaching institutions, administrators, academics, support staff and students work together to set a direction. DEEP schools employ many people who help establish and sustain the conditions that foster student success. Collaboration among all parts of the institution flows from a sense of purpose about what needs to be accomplished and from a widely held understanding of the institution's operating principles.

⁸⁸ Devlin, *et al.* (2012), p. 5

⁸⁹ Kuh and Kinzie (2004)

4. Recognising effective teaching

Teaching staff who are valued and rewarded will be motivated. Institutions that support high-quality teaching, and reward good teaching through promotion, are more likely to improve student learning.⁹⁰

4.1 Teaching-focused promotion

Across Australia, many academics feel that their institution does not value teaching highly. Teaching is widely perceived as less important than research to career progression. A 2010 survey of academics found that 75 per cent believed that research or scholarly activities were rewarded in promotion, while less than 30 per cent believed that effectiveness as a teacher was valued, as seen in figure 9. Many academics believe that as a determinant of promotion, teaching ranks behind not only research but also administration, leadership and a capacity to attract external funds for research. Of particular concern is that in 2010 fewer academics perceived that teaching was rewarded in promotion (29 per cent) compared to 1999 (44 per cent).⁹¹

Figure 9: Activities that are, and should be, valued in promotion, 2010



Source: Bexley, et al. (2011)

The falling status of teaching in career recognition comes even when the government has encouraged universities to recognise teaching performance in promotion. The Learning and Teaching Performance Fund (2006-2009) required universities to submit evidence of promotion policies, including effectiveness as a teacher, to be eligible for institution-level reward funding.

⁹⁰ McInnis, et al. (2012), Chalmers (2008) cites Braxton (2006), Hounsell and Entwistle (2005)

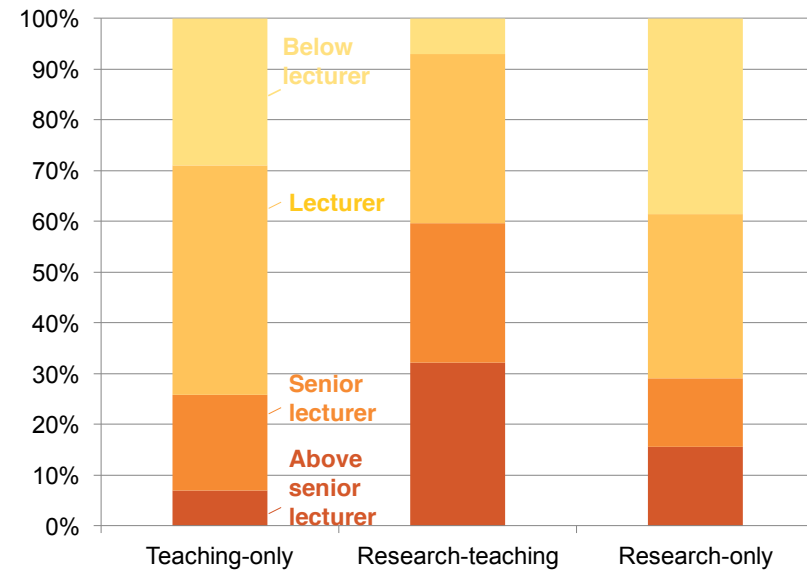
⁹¹ Bexley, et al. (2011) p. 25. Note this comparison should be interpreted cautiously given that the 1999 study only included full-time teaching and research positions.

Promotion policies do typically include teaching, but for teaching and research roles it tends to be a threshold requirement to be met rather than a deciding factor.

There is still a perception that promotion for effective teaching is only relevant for lower levels (that is, not above senior lecturer).⁹² Even where promotion policies do recognise teaching excellence through to professor level, it is unclear if these are used in practice. Teaching-only positions remain strongly concentrated in the junior, associate lecturer and lecturer ranks. As figure 10 shows, about 6 per cent of teaching-only roles are above senior lecturer level, whereas 16 per cent and more than 30 per cent respectively of research-only and research-teaching positions are above senior lecturer level.

The under-representation of teaching-only positions at higher levels may be due to few applicants nominating teaching (rather than research) as the main basis of their application promotion. This could reflect little demand from academics to become leading teachers, or alternatively a belief that promotion requires strong research credentials. Promotion policies may take time to have an effect. Major changes to academic career aspirations may not be seen until there is broader institutional leadership and support for teaching.

Figure 10: Academic staff by function and seniority, 2012



Source: DIICCSRTE (2013c)

A key issue in improving promotion prospects for good teachers is creating robust measures to assess teaching performance. While research has broadly accepted approaches for measuring performance, teaching is much more complex. Despite this, some Australian universities have made real progress in defining, recognising and rewarding teaching. In particular, the University of Wollongong shows that staff who based their case predominantly on teaching had an 80 per cent chance of promotion at both the

⁹² Probert (2013), p. 17

senior lecturer and associate professor level.⁹³ A large part of this success appears due to clear guidance on what constitutes effective teaching, and what evidence can be submitted to demonstrate it. The university focuses on having a mix of evidence on teaching: from students, peers, supervisors and self-reflection. It also provides training and mentoring to staff on how to submit an application for promotion against relevant teaching criteria, helping to embed understanding of effective teaching across the institution.⁹⁴

4.2 Teaching-focused awards

Government teaching awards, fellowships and grants help to recognise good teaching practice, and appear to be greatly valued in the sector.⁹⁵ A recent review of the suite of initiatives formerly offered by the Australian Learning and Teaching Council (ALTC) suggests that recipients of teaching awards should go on to play a leadership role in their institutions.⁹⁶ National awards are often integrated into promotion policies, although the review suggests that more could be done in this area. Promoting talented and motivated individuals helps spread good teaching practice and increases the status of teaching.

⁹³ Attwood (2010); Wills (2013), p. 8

⁹⁴ Attwood (2010); Wills (2013)

⁹⁵ Johns (2011)

⁹⁶ Ibid.

4.3 Teaching-only roles

While teaching-only roles have created jobs for academics motivated to pursue teaching, they often have low status. Universities sometimes use teaching-only positions as a way to manage staff whose research performance is unsatisfactory.⁹⁷

However, teaching-only roles can – when implemented well – help break the low status of teaching. A number of Australian universities have strategically increased the number of teaching-only roles that forge new, more prestigious career paths for teachers.⁹⁸ Such roles provide promotion opportunities, as well as dedicated time for ongoing development and research. Box 4 outlines an example of new teaching-focused roles at the University of Queensland.

⁹⁷ Probert (2013), p. 31, 35

⁹⁸ Ibid.

Box 4: Teaching-focused roles at the University of Queensland⁹⁹

In 2007, the University of Queensland created a new category of teaching-focused (TF) roles. These roles aim to help staff set aside more time for development, given difficulties in doing this when juggling both teaching and research roles.

To date, nearly 200 teaching-focused roles have been created. Recruitment has focused on teaching skills, and sought both external and internal applicants. The TF job descriptions use similar frameworks to teaching-research and research-only roles to help give them parity in status i.e. similar performance levels from associate lecturer to professor. A key difference is that TF roles involve up to 60 per cent of time in teaching (compared to the usual 40 per cent in teaching-research roles). TF roles also emphasise teaching-related research, rather than discipline-based research.

A key strength of TF roles is freeing up teacher time to explore innovative ways of teaching. Teachers have become more experienced in subject-specific teaching methods, and sharing this knowledge with colleagues. Teachers have also had more time to engage in education-related research, a product the university is looking to encourage.

⁹⁹ Information provided by Teaching and Educational Development Institute, UQ

5. Is research activity the problem?

Australia's university system seems biased in favour of research. As the preceding chapters show, university hiring and promotion policies put a priority on research. Unsurprisingly, the academics they employ typically prefer research to teaching. University research is important, but its dominance in university priorities looks like a problem for teaching.

Universities accept the need for better teaching, but often think that research promotes rather than hinders teaching. They see a positive 'teaching-research nexus': that students benefit from studying with researchers or in a research environment. Cutting-edge researchers might create a better curriculum, or the possibility of conducting research might attract higher-calibre people to the classroom, able to challenge or stimulate their students more effectively.

Negative and positive theories about the relationship between teaching and research are not always mutually exclusive. For example, the curriculum in research-intensive universities may be better, but academics may devote less time and effort to teaching it well.

The effects of the teaching-research relationship may not be the same for all students. For academically-oriented students interested in research, a research-intensive university may be the right place even if its academics devote less time and energy to teaching. Retention rates in these universities are high, despite

whatever teaching problems exist. But the needs of less academic students are different. Access to cutting-edge research is a lower educational priority than a clear understanding of the key concepts of their chosen discipline or profession.

5.1 Australian research on the teaching-research nexus

Past Australian studies found little evidence of a positive teaching-research relationship. A study published in the early 1990s found research excellence was associated with less effective teaching at both the individual academic and departmental level.¹⁰⁰ A 2002 study of an unnamed large urban Australian university found a close to zero relationship.¹⁰¹ A more recent study found a negative correlation between research quality and the good teaching scale in the Course Experience Questionnaire (CEQ) results.¹⁰²

¹⁰⁰ This is with the exception of some former colleges of advanced education, which were later turned into or merged with universities. Ramsden and Moses (1992)

¹⁰¹ Marsh and Hattie (2002). Zero correlation does not imply independence. It is possible that some research activities enhance teaching, while other activities simultaneously hinder it. However research activity that benefits teaching is likely to be inseparable from research activity that disadvantages teaching.

¹⁰² Barrett and Milbourne (2012)

5.2 New Grattan empirical work on the teaching-research relationship

For this report, we conducted a new analysis of the teaching-research relationship. The topic is of increasing importance. The growing number of students has coincided with intensified pressure on research performance. The Excellence in Research for Australia (ERA) assessment exercise by the Australian Research Council, along with the various international university rankings, expose universities to highly visible measures of their research strength. Public policy that rewards research performance further steers university management towards research.

Our analysis differs from the recent CEQ study (discussed in section 5.1).¹⁰³ The earlier work uses composite indicators of effective teaching, while our research looks at individual or small clusters of questions. Our goal is to more specifically explore the various hypotheses about the teaching-research relationship. Our research uses the Australasian Survey of Student Engagement (AUSSE) as well as CEQ data. The AUSSE covers a wider range of indicators of learning environment quality questions. While the AUSSE and CEQ surveys have limitations (discussed in box 1, page 9), their results are the best data available in Australia at present.

¹⁰³ Ibid.

5.2.1 Understanding the results

Ideally our analysis would assess the impact of research on teaching by comparing research-*free* to research-*rich* environments. As most departments in Australian universities have at least some research activity, we compare low-research and high-research departments.¹⁰⁴ We classified as 'low research' departments with 10 or fewer research students and fewer than 50 research publications over a six-year period.¹⁰⁵ We classified as 'high research' departments with more than 10 research students and an ERA rating of 3 or above on a 1 to 5 rating. A rating of 3 means the research is 'at world standard'.¹⁰⁶ A background paper on the empirical research, to be published in September 2013, will contain more detail on these classifications and other methodological details.

Our study compares students in low- and high-research departments across 22 disciplinary groups.¹⁰⁷ We examine student or graduate answers to 66 CEQ and AUSSE questions to

¹⁰⁴ The analysis is based on 'fields of education' and 'fields of research', which do not always map perfectly onto departments. However, departments are a reasonable approximation in most cases and the language of 'department' is more familiar.

¹⁰⁵ This corresponds to the 'insufficient research volume' classification in the ERA results.

¹⁰⁶ The minimum sample size is 20, and average sample size is 1917 for CEQ questions and 373 for AUSSE questions. This refers to the sample size for each question, by discipline.

¹⁰⁷ In some questions there were no differences between disciplines (after controlling for other factors). In these cases the disciplines were analysed together when estimating the effect of research.

investigate the effect of research activity.¹⁰⁸ Each gives us a finding of low-research department better, high-research department better, or no difference.¹⁰⁹

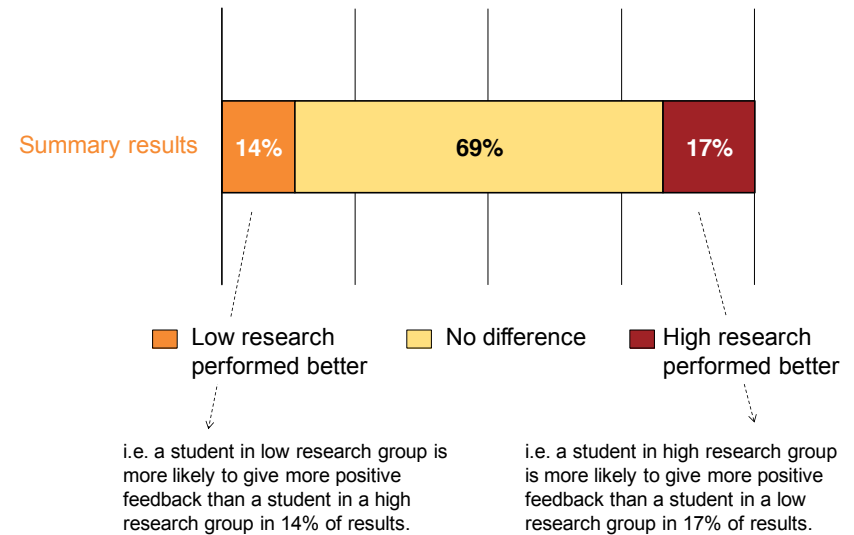
The analysis takes into account student or graduate factors largely or entirely outside the control of universities. We used statistical techniques to control for these potential influences on teaching and learning. At the individual student level, we controlled for age, gender, citizenship, language background, part-time/full-time study, live on/off campus and disability. We also included the median Australian Tertiary Admission Rank (ATAR) for the field of study in each university.¹¹⁰ Potential differences in university populations were controlled for by creating five groupings relating to university prestige, geography and mission.

5.2.2 Summary results

Overall, our empirical analysis shows that being educated in a high-research environment is typically neither a negative nor a

positive for student learning. There is no difference in 69 per cent of results analysed in this survey, as seen in figure 11.¹¹¹

Figure 11: Summary of results from high and low-research groups



Note: 905 results were analysed overall, across 66 questions and 22 disciplines. A 'result' is the estimated impact of research on students' survey responses to each question, by discipline.

¹⁰⁸ In our analysis, we compare student survey scores to the median score of all students for each question. Our regression then estimates the extent to which being in a high or low research environment predicts being above or below the median.

¹⁰⁹ We tested significance at the 15% level, rather than the more common 5% or 10%. The benefit is that groups with smaller sample sizes could be included in the study. Testing at this level increases the risk of a false positive. However, we consider this to be a conservative approach as it maximises our chances of finding a teaching-research relationship.

¹¹⁰ We did not have individual student information on ATAR, and so used the median data collected by the DIICCSRTE.

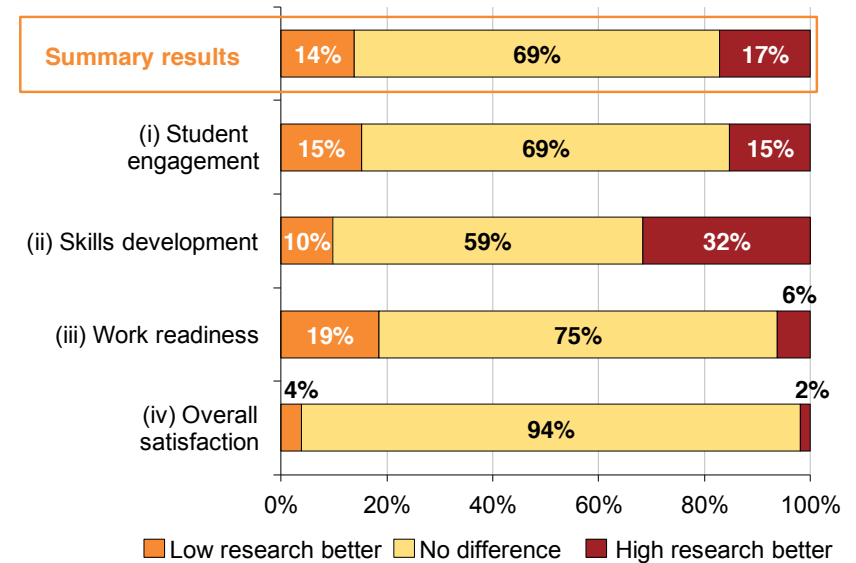
¹¹¹ 'No difference' does not necessarily mean that their responses were identical. Rather, it means that any observed gaps between the high and low-research groups were sufficiently small that they were likely to be chance differences.

Where there are differences, figure 11 shows that high-research environments perform better in 17 per cent of results, and low-research environments perform better in 14 per cent of results.

We can analyse these summary results in a more detailed way by organising the various CEQ and AUSSE questions into similar topics.

Figure 12 shows summary results across four different groups of questions covering student engagement, skills development, work readiness and overall satisfaction. Again, in each category the majority of results show no difference between high and low-research departments.

Figure 12: Results across four aspects of learning



Examining these four aspects of learning gives some nuance to the overall finding of mostly no difference. High-research environments performed better in skills development in 32 per cent of results, compared to only 10 per cent for low-research environments. Low-research environments perform better in work readiness in 19 per cent of results, compared to only 6 per cent of results in high-research environments. For student engagement, low and high-research each performed better than the other in 15 per cent of results. Almost all (94 per cent) results on student

satisfaction show no difference between the two groups.

(i) Student engagement

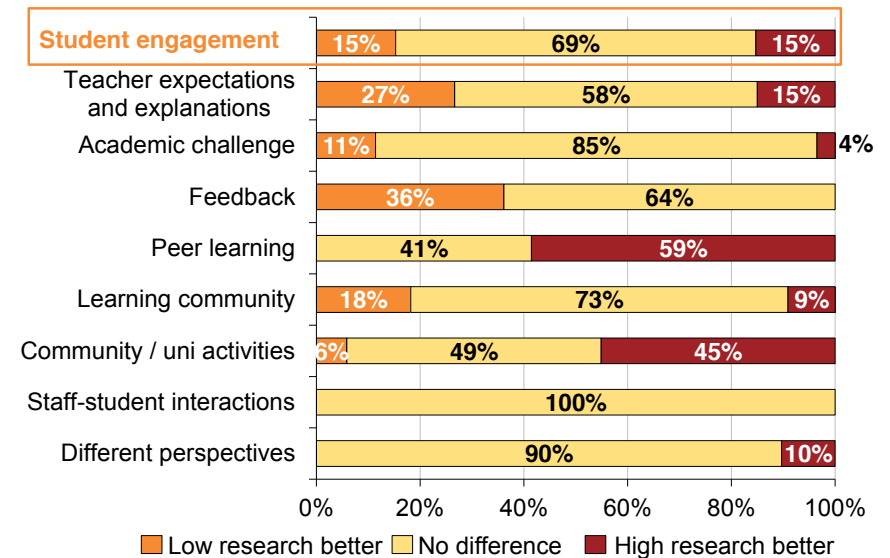
The AUSSE and CEQ questions on student engagement allow us to test some hypotheses about how teaching and research might interact.

Academics in high-research departments may expect more of their students due to their own expertise. They may also have more authority in the eyes of students due to their research achievements, or through their enthusiasm for inquiry inspire their students. If so, we would expect stronger results for high-research departments on measures of academic challenge.

Yet the data in our survey does not support this hypothesis. In a group of questions related to academic challenge, students in high-research environments scored more highly than those in low-research environments in only 4 per cent of results (**figure 13**

figure 13). The questions asked students whether they worked hard to meet teacher expectations, how much they were required to read for their course, and how much time they spent studying. A similar result was found for a question on whether teaching staff motivated students to do their best work.

Figure 13: Student engagement results



Note: 419 results were analysed in the student engagement cluster.

A negative hypothesis about the teaching-research relationship is that more research means less time for students. Conversely, academics in departments with few research students and little

research output should have more time available for students.

Questions regarding feedback on work give some support to this hypothesis. No results favoured high-research departments. By contrast, low-research departments out-performed high-research departments in 36 per cent of results. This outcome was largely driven by an AUSSE question about whether students “received prompt oral and written feedback...on academic performance.” The low-research group performed better on this item in every discipline examined.

However, in the student-staff interaction cluster, which also examines academic time use, there were no significant differences between high and low-research groups. These questions cover topics to do with discussing academic work with teachers outside class, or work with teachers on projects or other activities.

Students in high-research environments gave the most positive results in the “peer learning” cluster of questions. Nearly 60 per cent of results based on these questions favour the high-research group. They were more likely to say that they “worked with other students outside class to prepare assignments.” Teachers in high-research environments may better incorporate group-based assignments into coursework, perhaps reflecting good practice to encourage peer learning, or employer feedback that they want graduates to have teamwork skills.¹¹² Yet this result may be due to time-constraint factors: possibly academics in high-research

¹¹² GCA (2012b)

environments encourage peer assessment to reduce their own work, or students turn to each other because academic staff are less helpful.

(ii) Skills development

Students go to university to develop skills. These include cognitive skills and general personal skills valued by employers (section 1.2). Our surveys have questions on skills, but they should be treated with more caution than the student engagement questions. Skills questions typically ask students or graduates to evaluate their own development, a subject on which they may take an overly positive view.

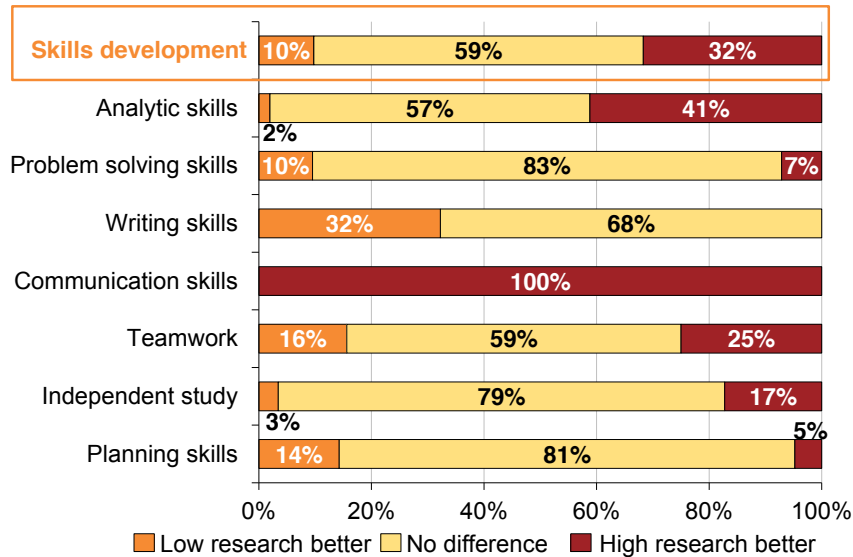
As in other groups of questions, the majority of results on skills development (59 per cent) show no difference between the high- and low-research environments. However, the high-research departments did better in this cluster of questions than in any other. In the remaining results, high-research environments perform better in 32 per cent of results, and low-research environments in 10 per cent of results.

On communication skills, the high-research group reported more development in all results (see figure 14).¹¹³ The questions asked about speaking clearly and effectively and developing communication skills relevant to their discipline. High-research groups also reported strong development of their quantitative

¹¹³ This involved two survey questions, each comparing high- and low-research departments overall rather than by discipline.

skills. Perhaps students admitted to universities that offer high-research environments have greater self-confidence than other students, which could result in over-optimistic beliefs about personal development. Further research would be needed to confirm this.

Figure 14: Skills development results



Note: 246 results were analysed in the skills development cluster

There were no differences between the high and low-research groups on a question about “thinking critically and analytically.”

The only skills development area in which low-research groups reported substantially more progress was on writing skills, coming out ahead on nearly a third of these questions.

(iii) Work readiness

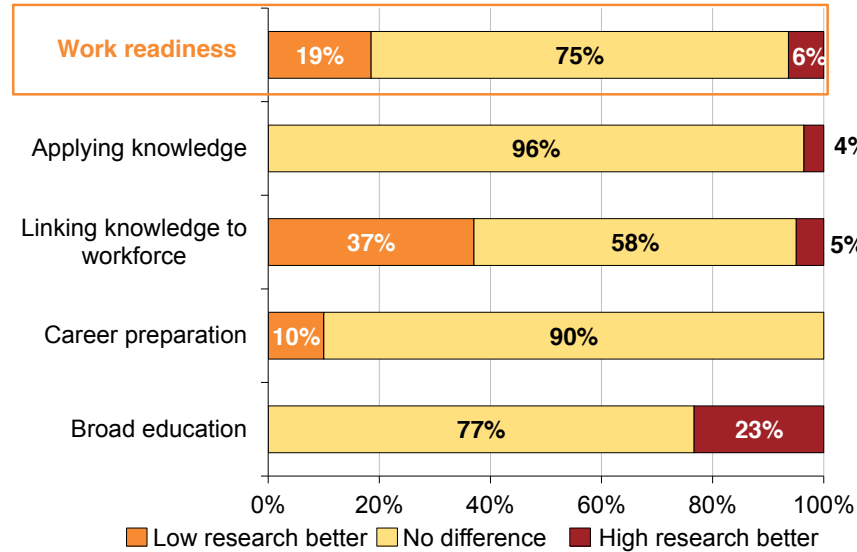
In Australia, most bachelor-degree graduates (about three-quarters) give a job-related reason as the main reason for study.¹¹⁴ Low-research environments performed better in 19 per cent of work-readiness results, compared to only 6 per cent of results for high-research environments. Again, however, the vast majority of results (three quarters) show no difference in work readiness, as seen in figure 15.

The stronger result for low-research environments is largely driven by a question on “blended academic learning with workplace experience”, where low-research performs better across all disciplines. This matches the common perception that low-research environments are more practical and work-oriented. Teachers in low-research environments may integrate work placements into their courses more often, or alternatively, their students may be more enthusiastic about work experience.

High research environments performed better in providing a broad education in 23 per cent of results. This is also in line with a belief that high-research environments provide a broader, more rounded education which is valued by some employers.

¹¹⁴ ABS (2010)

Figure 15: Work readiness results

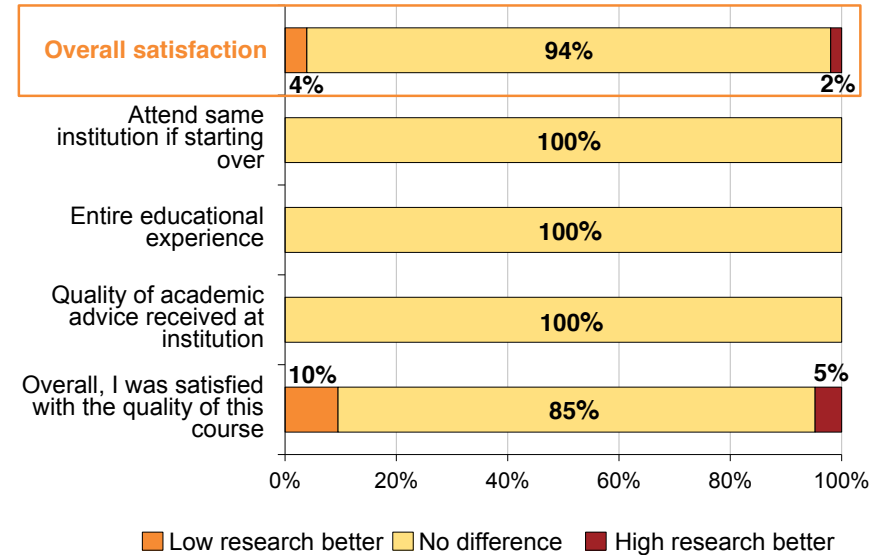


Note: 189 results were analysed in the work readiness cluster

(iv) Overall student satisfaction

Our results show little difference in overall student satisfaction between high and low-research groups, holding other factors constant (figure 16). In almost all results (94 per cent) there is no difference. There is no difference in 100 per cent of results in: whether students would attend the same institution starting over, satisfaction with the entire educational experience, and the perceived quality of academic advice received at the university.

Figure 16: Overall satisfaction results



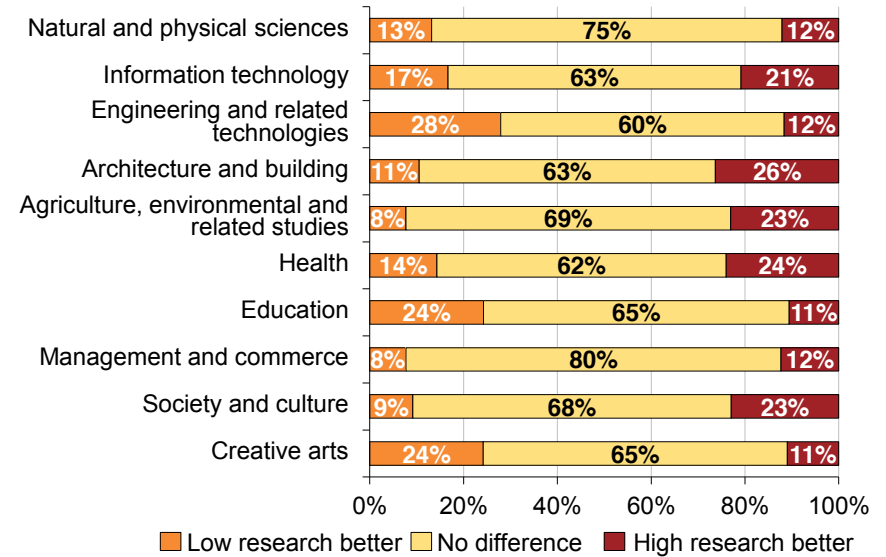
Note: 51 results were analysed in the satisfaction cluster

5.2.3 Discipline level results

Does the research nexus have different effects on different disciplines? Figure 17 shows the results for each broad field of education. In every field at least 60 per cent of the results show no difference between high- and low-research groups.

Every field of education has a small percentage of results where high- and low-research environments perform better. While some fields of education have more positive results for high- or for low-research environments than others, there is no obvious pattern to them. For example, high-research environments perform better in some more vocationally-oriented fields (such as architecture and building) but not others (such as management and commerce). Other discipline-specific factors not directly related to research intensiveness may be at play here. This could include, for example, differences in teacher quality or curriculum design between disciplines not directly controlled for in our study.

Figure 17: Results by broad field of education



Note: Results are presented across ten broad fields of education, composed of 22 disciplines.

5.3 Is there a positive teaching-research nexus?

The empirical results in this study give little reason to believe that teaching is improved by co-producing it with research. The hypothesis that students would be more academically challenged in a high-research environment was not supported by relevant questions in the AUSSE and CEQ. The hypothesis that

academics in low-research environments might spend more time and effort on their students received partial support.

The relatively good results in some areas for students in high-research environments may be due to factors not directly related to research activity. They are more involved in the university community and study together more, but the causal connection may be their social background rather than the university's research activity. Students in high-research environments reported good results on skills development, but these are the questions most vulnerable to biased responses.

There are some hypotheses about the teaching-research relationship that we cannot test with this data. We don't know whether curriculum differs much between high and low-research environments. However, there is little reason to believe that research activity is necessary for a quality curriculum. In the many degrees preparing students for future work, professional admission requirements limit differences between what universities teach. Academics do not need to be active researchers to keep up with research activity. Scholarship involves "keeping abreast of the literature and new research...and using that knowledge to inform learning and teaching."¹¹⁵ Given the specialised nature of modern research, research-active academics may not be aware of all research relevant to an undergraduate curriculum. Universities can also buy advanced course content. This is one potential business model for massive open online course (MOOC) providers such as Coursera and

¹¹⁵ TEQSA (2012b), p. 37

edX.¹¹⁶ They sell course materials developed by some of the world's leading research universities.

Although this study finds no evidence that research activity leads to a better teaching environment, equally it does not strongly support the opposite hypothesis: that research is bad for teaching. In some disciplines, students in high-research areas express more negative views about the feedback they receive. But in many other disciplines this does not seem to be a problem. Overall, the level of research just doesn't seem to systematically affect teaching quality either way.

The likely reason is that Australia's universities have a common culture, which does not vary significantly with the level of research activity. They have similar approaches to teaching. They hire people with similar qualifications and attitudes. They mostly fill on-going academic jobs on a teaching and research or research basis. They promote academics in similar ways. Most are happy for temporary staff to do much of the teaching. It is these practices that need to change.

¹¹⁶ Norton, *et al.* (2013), p. 6-7. Even high-research universities are interested in doing this, with UWA replacing lectures in one its subject with a Stanford MOOC: Dodd (2013)

6. Policies to improve teaching

Compared to school education, higher education lacks much international comparative policy analysis. In school education, countries that top international PISA tests are well known and researched. There is considerable analysis of how these school systems succeed, and which policy levers were used.¹¹⁷ While Australian policymakers can and do draw on the higher education experiences of other countries, we are less confident of cause and effect than is the case with schools. There are no examples of major policy changes clearly leading directly to significant improvements in student performance.

In Australia, the long-running Course Experience Questionnaire (CEQ) survey shows steady improvements since the late 1990s (section 1.6). Policy changes discussed in this chapter almost certainly contributed to this progress. But with many policies running concurrently it is hard to quantify their individual impact. Given these analytical limitations, the best approach is to craft policies around the more robust research on student learning at the institutional level.

These policies need to take into account the different legal and political circumstances of universities compared to schools. Governments typically directly control public schools, and often extensively regulate private schools. By contrast, both public and

private universities have a high degree of autonomy in academic matters. This reflects formal constitutional constraints on the Commonwealth Government until recently, and a political culture that supports academics and universities having substantial intellectual independence from government.¹¹⁸

While not yet directly regulating course content, the Commonwealth did in 2012 start regulating the academic organisation of universities. They must all now meet detailed standards enforced by the Tertiary Education Quality and Standards Agency (TEQSA). This chapter discusses whether or not this is the right path to reform. It argues that older policies based on incentives, information and persuasion may be preferable.

6.1 Transparency and information

Until the 1990s, universities rarely surveyed student views on teaching.¹¹⁹ This is revealing in itself of university attitudes to teaching. Dissatisfied with this situation, the Commonwealth Government in the late 1980s established a process that led to the first national student survey, the Course Experience

¹¹⁷ Mourshed, *et al.* (2010), OECD (2011), Woessmann, *et al.* (2009), Jensen, *et al.* (2012)

¹¹⁸ For the legal issues, see Norton (2013a) p. 59-60

¹¹⁹ A student guide to universities published in 1991 summarised staff development practices. Only about a quarter of the universities for which there was information reported processes for incorporating student feedback: Lewis (1991)

Questionnaire.¹²⁰ It is sent to people who have recently completed a degree. The first results in early 1993 revealed widespread dissatisfaction with the quality of teaching. Only a quarter of respondents agreed with the statement that staff put a lot of time into commenting on their work. Only a third believed that teaching staff had motivated them to do their best work. There were negative responses on many other questions as well.¹²¹

6.1.1 Information as a management tool

At the time, student surveys and other student indicators were intended for use in government performance funding.¹²² That did not happen until many years later (section 6.3). But the CEQ did help to persuade universities that teaching needed improving. By the mid-1990s, three-quarters of universities used student feedback to assess teaching quality.¹²³ These universities now had the information they needed to remove the worst teachers from the classroom, and to encourage other teachers to improve. By 2011, student surveys were mandatory in 16 universities and necessary for promotion in most others.¹²⁴

Many universities also participate in the Australasian Survey of Student Engagement (AUSSE). Most do not publicly report their AUSSE results, but their involvement is a sign that they now take student views seriously. They receive reports from the Australian

¹²⁰ DET (1991)

¹²¹ GCA (2010), p. 29

¹²² Dawkins (1988), p. 85-86

¹²³ Ramsden, *et al.* (1995), p. 39

¹²⁴ Hirschberg, *et al.* (2011), p. 3

Council for Educational Research (ACER) benchmarking their results against other institutions, something that is now also required by regulation (section 6.5).

6.1.2 Informing students

In theory, students could use survey information to guide their choices between universities. However, university applicants have not had easy access to CEQ data. Until recently the only widely distributed source was the *Good Universities Guide*, an annual consumer guide to higher education. It gives universities star ratings based on CEQ results. Whether students looking for advice on specific courses find institutional ratings useful is unknown. Vice-chancellors were sometimes aggrieved by their institution's low number of stars.¹²⁵

Since 2012, the My University website has provided good teaching scale results for each university by field of education. In future years, My University is likely to include results from a new University Experience Survey (UES).¹²⁶ Unlike the CEQ, the UES is of current university students. This fixes one problem with the CEQ: it only surveys graduates, missing people with poor experiences who leave before finishing their degrees. The UES will also provide much more current and precise information than the retrospective overview provided by the CEQ. Substantial

¹²⁵ Healy (1997). Vice-Chancellor grievances were reasonable. The five stars were based on dividing universities into quintiles of performance. This exaggerated the often small absolute differences between them on the CEQ good teaching scale.

¹²⁶ Radloff, *et al.* (2012)

improvements by universities should flow through quickly into the public record.

While My University reports on satisfaction with teaching are potentially more useful than the *Good Universities Guide* institutional star system, as yet there is no evidence on whether they influence student choices.¹²⁷ Still, My University should be retained. The history of the CEQ suggests that negative results have a positive political effect within universities, even if the market effect is muted.

6.1.3 Measuring achievement

Student surveys can tell us about the learning environment, but not about how much students know or what skills they have. There is little direct and strong evidence on these learning outcomes that we can use to make comparisons over time or between universities.

As a guide, the CEQ includes questions on whether the course improved various skills. Despite apparent improvements in the learning environment, graduates' responses to most CEQ skills questions are generally little-changed since the early 1990s. However, graduates do show increased confidence in their ability

¹²⁷ My School, the companion website to My University, reports on school achievement. However, it does not seem to be having a major effect on enrolment patterns: Jensen, *et al.* (2013)

to tackle unfamiliar problems and to work as a team member.¹²⁸ Obviously these are not objective measures of skills.

Standardised skills tests could help fill this gap in our knowledge. Yet devising value-added tests that are comparable between institutions is difficult.¹²⁹ Already, one plan for a standardised test linked to funding has been defeated. Under pressure from universities and an expert reference group, the Commonwealth Government dropped a proposal to administer the American Collegiate Learning Assessment test (CLA).¹³⁰

To date, no mandatory discipline-based standardised tests have been proposed. Australia has, however, participated in and partly funded the OECD Assessment of Higher Education Learning Outcomes (AHELO) project. It has specific tests for engineering and economics students, as well as tests of generic skills. Australian universities took part in the engineering component.¹³¹

One problem facing AHELO and other standardised tests is ensuring that a representative sample of students sit the test. Short surveys of student opinion already struggle to achieve adequate samples. Extrinsic rewards such a monetary payment or results that could be used with employers may produce a biased sample. Linking the test to formal assessment taken by all students is likely to be the only way to overcome this problem.

¹²⁸ GCA (2010), p. 29

¹²⁹ Devlin (2010)

¹³⁰ Trounson (2012)

¹³¹ See this report on AHELO: Tremblay, *et al.* (2012)

Politically, the CLA experience, compared to the CEQ experience, is instructive for advancing achievement testing. Surveys or testing linked to funding greatly increase university anxiety levels, triggering political contests around content and methodology (see also section 6.3). The initial low stakes for the CEQ enabled a lot of useful information to be collected, which in turn led to universities improving themselves.

In the United States, some universities voluntarily participate in an accountability system that includes standardised tests.¹³² They use these tests for their own quality control. There are plans to put them on the College Portrait website (which is similar to My University). Typically they compare their students at different stages in their education, and with students at comparable institutions. For this voluntary accountability program the Educational Testing Service (ETS) provides generic skills tests along with specific subject-matter tests. As of June 2013, it offered tests in 13 disciplines.

Australian universities should be encouraged to participate in voluntary standardised testing programs. Based on universities' past behaviour, a small government funding program would encourage at least some of them to act. Especially for universities with lower profiles or prestige, these tests can show they are value adding for their students. This creates a potential market incentive for participation. If their performance is not strong, the tests would help them identify where they need to improve.

¹³² Lederman (2013)

6.2 Office for Learning and Teaching

Since the early 1990s the Commonwealth Government has funded a succession of bodies with the objective of improving learning and teaching. The latest is the Office for Learning and Teaching (OLT) which takes on similar work to its predecessor – the Australian Learning and Teaching Council (ALTC).¹³³ Broadly speaking, these bodies have identified, supported and rewarded effective teaching practices and encouraged innovation. They have sought to embed and share good practices in higher education institutions.

These objectives have been achieved through awards for outstanding university teaching, fellowships and secondments for leading educators, grants for innovative teaching and leadership capabilities, support for national research to inform policy and practice, and sharing good practice through networks, conferences, and professional development opportunities.

A recent review of ALTC initiatives (now under the auspices of the OLT) found them highly valued by the sector.¹³⁴ The review found “overwhelming” sector support for the suite of current grants, awards and fellowships currently offered, considered as “one of

¹³³ The Council was formerly the Carrick Institute for Learning and Teaching in Higher Education, established in 2004. The predecessors to this body were the Committee for the Advancement of University Teaching (CAUT), the Committee for University Teaching and Staff Development (CUTSD) and the Australian Universities Teaching Committee (AUTC)

¹³⁴ Johns (2011)

the most valuable contributions to the teaching and learning agenda.”¹³⁵

A number of ALTC initiatives made substantive contributions in setting out what constitutes effective teaching, and how it can be assessed and monitored. The *Learning and Teaching Academic Standards Project* in 2010 outlines specific academic standards and potential indicators for assessing academic quality.¹³⁶ The *National Teaching Quality Indicators Project* also trialled a tool that helps universities to assess quality and continuously improve quality.

6.3 Performance funding

Since the late 1980s, universities have received performance-based funding for research. Indicators such as numbers of academic publications, research income and PhD completions have been used. Yet it was not until 2006 that teaching-related indicators were used to drive a Commonwealth Government funding program, the Learning and Teaching Performance Fund. The CEQ, completions, and graduate employment outcomes were included in complex formulae to distribute performance funding.¹³⁷

Performance-based funding schemes set broad goals but leave open how universities reach their targets. This allows them to tailor policies to their particular circumstances, to prioritise

changes likely to bring the highest gains, and to experiment with new teaching methods. From this perspective, performance funding may be preferable to mandating specific inputs (section 6.5). However, there are many criticisms of performance funding in general, and of the specific performance funding programs Australia has used.

For example, governments cannot make too much teaching funding contingent without depriving universities of the resources needed to teach at all. At the same time, money on offer needs to be large enough to alter behaviour. Performance-based funding also risks entrenching historical relative patterns of achievement, as has tended to happen with research.¹³⁸ Universities that need to do better are deprived of one lever for improvement, increased funding.¹³⁹

To work, performance-funding schemes need stable indicators against which institutions can frame medium-term policies. Australian teaching performance funding (2006 - 2009) suffered from frequent changes to criteria, brought in partly in response to criticisms about how performance was assessed.¹⁴⁰ Teaching is a complex service with many dimensions. The CEQ good teaching scale used by government only covered some of these. Learning is co-produced by teachers and students, and responses to some questions may reflect types of students as well as institutional

¹³⁵ Ibid., p. 2

¹³⁶ Coates (2010)

¹³⁷ Chalmers, *et al.* (2008), p. 19-20

¹³⁸ For example, the Group of Eight universities have increased their share of all research funding: Larkins (2011), p. 273

¹³⁹ A point made in a 2011 policy review: Lomax-Smith, *et al.* (2011), p. 75

¹⁴⁰ Coaldrake and Stedman (2013), ch. 5

policies. If performance funding is assessed relative to other higher education providers, then the student intake needs to be taken into account, as it was in the 2006–09 scheme. In later versions, performance funding was aimed at generating year-by-year improvements at particular institutions. But there were criticisms that these could reflect statistical noise as much as real improvements. The scheme was dropped in 2011 as part of budget cuts, although performance targets are still in university ‘compacts’: three-year agreements between individual universities and the Commonwealth Government.

Genuine difficulties in measuring improvement, political controversies and budget shortfalls have seriously undermined Australia’s teaching performance-funding schemes. Any future scheme faces the credibility problem left by its predecessors. If university administrators fear that the indicators will change, or that the program will be abolished before they get their money, their incentives are weak. The only aspect of the scheme worth serious effort is lobbying on the initial performance criteria, so that the university receives windfall gains for what is already doing. Given all these problems, policy should not return to performance funding.

6.4 Market competition

In most markets, firms that offer bad service lose customers. On this logic, the spread of markets in higher education should help improve teaching. Since the late 1980s Australia has moved from no market allocation of student places to nearly 40 per cent in the late 2000s, as the number of full fee-paying places outside the

Commonwealth funding system increased. From 2012, the demand-driven funding system has made about 90 per cent of student places market-driven to some extent.¹⁴¹

The upwards CEQ trend in the good teaching scale (discussed in section 1.6) is consistent with a relationship between markets and teaching quality. As universities have become more and more dependent on international students since the 1990s, they have simultaneously improved their teaching. Yet not everyone sees a causal connection.

Belinda Probert, a former Deputy Vice-Chancellor at La Trobe University, points out that prospective students aren’t necessarily primarily concerned with teaching quality: “the education market favours selectivity, brand names, visibility, and major research portfolios.”¹⁴² A student may rationally prefer a university with high-ability students and institutional prestige to one with high-quality teaching. As section 1.1 shows, high ATAR students have excellent prospects of completion wherever they go, allowing them to give other factors greater weight in selecting a university. An American study found that for ‘non-academic’ students, factors

¹⁴¹ The exceptions are various ‘designated’ Commonwealth-supported places (principally sub-bachelor courses, postgraduate courses, and medical courses) and research students. CSPs still have price caps, and non-university higher education providers are excluded, so the demand-driven system is still missing some market conditions that would drive further competition.

¹⁴² Probert (2013), p. 18

such as student activities, sports and dormitories could drive choice more than academic factors.¹⁴³

Even for potential students who are interested in teaching quality, they have found it hard to know until very recently which university does best on teaching surveys (section 6.1). Historical reputations, admission requirements, and research rankings were, and remain, more visible. They become proxies for overall quality.

But learning quality information issues can be overstated. Few consumer markets rely heavily on ‘scientific’ advice. Consumers’ personal experiences, information from others, advertising and reviews all shape decisions. A 2012 survey of international students found that 96 per cent rated quality of teaching as important to their choice of institution. Nearly a third used friends already in Australia as a source of information.¹⁴⁴

The initial choice of a university by someone new to higher education is only one point at which student choices can affect university behaviour. Universities have internal markets. Students choose which subjects they take, and between lecturers and tutors in large-enrolment subjects. While universities typically do not publish subject-level student surveys, there is a lot of word of mouth on which subjects and teachers are best. Teachers and departments that do not attract students can lose funding.

¹⁴³ Jacob, *et al.* (2013). Previous Grattan analysis supports the idea that there teaching is only one of the outcomes or services students are seeking in the higher education market: Norton, *et al.* (2013), ch. 2.

¹⁴⁴ AEI (2013), p. 9-10

Post-enrolment choices to transfer or drop out affect universities financially. The proportion of students changing university after first year increased from four to six per cent between 2006 and 2011. Larger numbers – around 13 per cent in recent years – disappear from the system altogether.¹⁴⁵ In the previous system of allocating student places, where demand always significantly exceeded supply, universities could usually replace departing students with new first-year students. With the demand-driven system, student attrition has become a larger financial issue for universities.

We lack exit surveys explaining why students move or leave. But the University Experience Survey asked the 18 per cent of students in its sample who had considered leaving their reasons why. Potential teaching-related issues are “expectations not met” (30 per cent), “academic support” (21 per cent), and “quality concerns” (21 per cent).¹⁴⁶ These figures suggest that quality is a factor for at least some students who eventually leave.

Higher education markets are not invariably going to punish bad teaching or reward good teaching. But compared to earlier systems of centralised allocation of student places, which allowed universities to ignore student concerns with financial impunity, markets give students power. The Minister for Higher Education, Senator Kim Carr, has cast doubt on the future of the demand-driven system introduced in 2012.¹⁴⁷ The competitive pressure the

¹⁴⁵ DIICCSRTE (2013b), appendix 4

¹⁴⁶ Radloff, *et al.* (2012), p. 19

¹⁴⁷ Norton (2013b)

demand-driven system places on universities makes it important to retain this reform.

6.5 Regulated standards

Historically, universities faced little direct regulation of teaching quality. This changed with the establishment of the Tertiary Education Quality and Standards Agency (TEQSA) in 2012. As a condition of registration, universities must now comply with a wide range of standards relating to teaching. This is a major shift from previous information and incentives-based approaches to improving quality.

The standards do not require teaching staff to have teaching qualifications. However, they are required to understand “pedagogical and/or adult learning principles relevant to the student cohort being taught.” Evidence of their understanding can include induction programs, professional development programs and peer support processes.¹⁴⁸ The university must advise teaching staff of student and other feedback on their teaching and give them opportunities to improve their teaching.¹⁴⁹ Students must receive timely and adequate feedback on their work, which is interpreted to mean enough to help students with future assessed work.¹⁵⁰

¹⁴⁸ TEQSA (2012a), p. 29. This document provides TEQSA’s interpretation of DIISRTE (2012).

¹⁴⁹ TEQSA (2012a), p. 42

¹⁵⁰ DIISRTE (2012), p. 33

At the institutional level, universities need to compare their performance on teaching and student learning outcomes with those of other higher education providers.¹⁵¹ They must show that they identify and implement good practices in student teaching and learning. Evidence for this can include internal processes for identifying and disseminating good teaching practices, peer support and review of teaching, publication of research into teaching, and attendance figures for professional development programs.¹⁵²

These requirements are consistent with the literature on good teaching. The issue is whether the regulated standards approach is the right one for improving teaching. Universities must meet all the requirements, with no scope for setting priorities or considering cost effectiveness. For example, in principle more teacher training would improve student learning (chapter 3). Yet Canadian experience shows that simply offering more training opportunities can have little impact when there is teacher scepticism, high workloads, and few promotion incentives.¹⁵³

Diverting significant resources to meet and report on TEQSA standards could also be counter-productive. Academics already say that they spend too much time on administrative and accountability tasks.¹⁵⁴ Compliance activities could leave academics with less time for important teaching tasks not

¹⁵¹ *Ibid.*, p. 5

¹⁵² TEQSA (2012c), p. 25-26

¹⁵³ Knapper (2013)

¹⁵⁴ Bexley, *et al.* (2011), p. 5, 46

specifically covered in the standards. If compliance activities undermine morale they are not likely to produce a culture change in favour of teaching. Perceived TEQSA overreach has already contributed to the government announcing a higher education red tape review.¹⁵⁵

The university re-registration process should provide an overview of where universities are at in professionalising teaching. However, policies based on incentives and persuasion are more consistent with academic culture. They also allow more flexibility in setting priorities, and have a track record of steady if slow improvement in student satisfaction with teaching. At this point, Australia should not proceed with further detailed regulation of teaching-related standards.

6.6 Reducing student-staff ratios

The number of students per academic staff member has increased considerably over the last two decades. In 1990, Australian universities on average had 13 students per academic. This had increased to 20 by 2011.¹⁵⁶ Many aspects of good teaching involve the time of academic staff, so such a large increase in the ratio might well have impaired the learning environment in Australia's universities.

In practice, graduates took an increasingly positive view of teaching even as student-staff ratios went up (section 1.6). Within

¹⁵⁵ Emerson and Bird (2013)

¹⁵⁶ Universities Australia (2010), DIICCSRTE (2012c), appendix 5.13

the cluster of questions that make up the good teaching scale for the CEQ, the biggest improvement was on a question asking students whether academics spent a lot of time commenting on their work.¹⁵⁷ This is not what we would expect if academics had less time to spend on each student.

One explanation for this surprising result is technological change. Responses to the time commenting on work question increased significantly in the early years of this century, coinciding with the spread of home internet access.¹⁵⁸ Email increased students' ability to communicate with academics, and online learning management systems gave academics the opportunity to let all students see their answers to the queries of individual students. However, continued year-by-year incremental improvement, despite near universal internet access among students, suggests that the change may be due to more than just technology.

High student-staff ratios encourage less labour-intensive large classes, in which many students can be taught at once. In general, the international research on large classes finds that they have negative effects on academic outcomes.¹⁵⁹ However, there are some complicating aspects of the research. Some studies find that while there are disadvantages in going from small to large

¹⁵⁷ GCA (1997-2013).

¹⁵⁸ Among households with children, home internet access went from 29 per cent in 1999 to 72 per cent in 2004-05: ABS (2005).

¹⁵⁹ Pascarella and Terenzini (2005), p. 94, Gibbs (2010), p.19-21

classes, further increases in already large classes may not make things any worse.¹⁶⁰

Unfortunately, there is no Australian data on class sizes. Anecdotal evidence suggests that once-small tutorials are now large. Based on the research overseas, smaller tutorials would be better. However, expanding already large lectures may not have additional negative effects.

Although academics have a finite amount of time, they can choose how much of it they spend on teaching, and they can use that time more or less effectively. That seems to be the story of the last 20 years: any negative effects from increasing student-staff ratios have been outweighed by academics spending more time on teaching and teaching more effectively.

Decreasing student-staff ratios could bring benefits if as a result academics spent more time on teaching and students. The private Bond University and various non-university higher education providers offer smaller classes. These are typically funded through fees that are higher than the charges paid by students in Commonwealth-supported places. A small but significant market of students is willing to pay these fees.

The private higher education sector is very exposed to competition, and must meet student expectations. Yet there is no guarantee that increased funding for public universities would flow through into direct benefits to students. Over 2005 to 2008 public

universities enjoyed increased public funding, increased student contributions, and a strong full-fee international student market. Yet student-staff ratios continued to rise. Future additional revenues may also be spent on salary increases and research rather than smaller classes.

Additional spending could be tied to class size reduction. But monitoring and regulating class sizes would create a major additional bureaucratic burden on universities and their staff. Even if achieved, smaller classes may not be the most cost effective way of improving teaching. The experience in school education is that the money spent reducing class size has not paid off in improved learning.¹⁶¹ We should look for less costly and administratively complex ways of improving teaching.

6.7 Teaching-focused roles

There is no clear evidence that teaching-only roles, in themselves, lead to a better-quality student learning experience. Whether an academic is a researcher does not of itself necessarily affect learning outcomes. Yet teaching-focused roles can offer potential for better recruitment, development, and recognition of individuals with high-level teaching skills, free of dominating research considerations.

Teaching-focused positions offer career pathways for individuals who are motivated to teach, but don't have research backgrounds. When advertised externally, these positions can inject fresh talent

¹⁶⁰ Johnson (2010), Bandiera, *et al.* (2010)

¹⁶¹ Jensen (2010), p. 8-10

into academia; from young people with a passion to teach to industry professionals who can bridge gaps in the theory-practice divide.

A 2013 review of teaching-focused positions in Australia finds mixed effects on quality to date, but highlights a number of good-practice cases that have had important benefits.¹⁶² The review emphasises that quality improvements are unlikely when teaching-focused positions are implemented for opportunistic reasons, such as reclassifying under-performing researchers. But when positions have been created to improve learning, there have been benefits through the development of clearer job descriptions and promotion criteria.¹⁶³ These benefits have improved understanding of what standards are required for teaching at different appointment levels, and the evidence needed for promotion. Setting clear expectations on what constitutes effective teaching can help embed a deeper understanding of quality within institutional structures.¹⁶⁴

¹⁶² Probert (2013)

¹⁶³ Ibid. p. 26 cites examples from La Trobe University, University of Queensland, Monash University and Southern Cross University.

¹⁶⁴ Ibid.

6.7.1 Proposed new policy: funding more teaching-focused positions to bring about cultural change

This report proposes a new policy to speed up the spread of good teaching practices through universities. The policy would double the number of teaching-focused positions in Australian universities over the next six years. These 2500 positions would take the total number of teaching-focused jobs to 5000, on a full-time equivalent basis. The new positions would make teaching-focused academics in ongoing jobs about 10 per cent of the total teaching workforce, including sessional staff.

The positions aim to be a circuit-breaker to the institutional culture of focusing on research. Creating more teaching-focused roles represents a strategic shift to get the best teachers into the right roles, to give them the widest reach across the greatest number of students.

Importantly, the scheme will also create opportunities for outstanding *existing* teachers to be promoted to leadership roles. There is almost certainly already a pool of applicants, since over a third of the current academic workforce in combined teaching-research roles prefer teaching over research.¹⁶⁵ While many universities have policies for promoting excellent teachers, in practice few such promotions occur at senior levels. This scheme will provide additional resources to help talented teachers advance their careers.

¹⁶⁵ Bexley, *et al.* (2011), p. 15

Universities already use people from the professions as sessional teaching staff. The scheme could also be used to give ongoing teaching employment to professionals looking for a career change.

The new teaching-focused positions could be appointed at a variety of levels, from junior to senior level teaching positions. This would enable a multi-pronged approach to regenerating the workforce. It would attract a range of individuals at the start, middle or late in their careers into university teaching.

The scheme would be competitive, awarded to approximately ten to twelve institutions only. This would enable a critical mass within institutions to raise the profile of teaching. Making teaching-focused positions available to all universities could encourage a box-ticking approach to eligibility criteria rather than a strong commitment to improved teaching. The focus on a few institutions also recognises that some universities will want to maintain an academic workforce that emphasises research performance.

Given the importance of institutional leadership for teaching quality, successful universities must demonstrate a strong commitment to these roles. Universities will need to demonstrate clear plans for defining and evaluating good teaching practice, and for following through on promoting good teachers. They will need to show a serious commitment to providing adequate support and resources for teaching.

All successful institutions will meet the specific eligibility criteria outlined below. They will also need to demonstrate existing or

planned initiatives that would improve the student experience. They could include teaching technologies and academic student support services as well as measures to improve the skills of academic staff.

Submissions from universities would be assessed by individuals appointed by the minister for higher education. They could include academic and other experts in university teaching and teachers or administrators with strong track records in innovative teaching (perhaps drawing on previous winners of teaching awards). They would examine the quality of university submissions against the eligibility criteria, as well as their overall plans for improving teaching.

The Office for Learning and Teaching would be asked to help periodically evaluate each successful university, in order to assess whether the program was achieving its overall goals, and the strengths and weaknesses of the various strategies pursued by different universities. It would disseminate any lessons learned to the higher education sector.

Conditions of new teaching-focused academic roles

- Teaching-focused positions must be externally advertised and focused on recruiting the right people for the role. Existing teaching-research staff and casual teaching staff could apply, but must go through a competitive job selection process.
- Teaching-focused positions should have selection criteria relating to likely success as a teacher. They could include

teaching experience, teaching qualifications, and/or scholarship on teaching.

- Teaching-focused positions should allow professional practice as one eligibility criterion, in order to help improve work-integrated learning. Part-time or conjoined work that allows parallel professional practice should be supported.
- Teaching-focused positions will have a least 75 per cent of university time devoted to teaching, teaching-related scholarship activities, professional development and peer collaboration. Time needs to be left for community engagement, university administration, or teaching-related research.

Proposed eligibility criteria for institutions

As discussed in section 6.7, the institutional context is important to the success of teaching-focused positions. Teaching-focused positions should have:

- Teacher development opportunities, including training, scholarship activities and peer collaboration. Time and resources in teacher workloads must be made available for this.
- Promotions policies should facilitate teaching-focused academics at all ranks.
- Departmental leaders with a commitment to teaching-focused

roles and an understanding of what support and resources they require.

- Broad, iterative evaluation of the quality of teaching, with a focus on continuous improvement.

Funding implications

When fully implemented, these 2500 teaching-focused jobs would incur about \$350 million in salary costs in today's dollars, at an upper-level senior lecturer salary on average. In practice, the total salary costs to universities would be much less than this, as they would have to employ a teaching workforce in any case. Higher salary costs would come principally from less use of casual staff and appointing teaching staff at more senior levels. Successful universities would also incur a range of costs in staff training and other measures included in their plans to improve teaching.

New funding of half the salary costs, or around \$175 million when the program was fully implemented, would provide generous funding for teaching improvement and act as a substantial incentive. The scheme would cost less in the earlier years, as universities would phase-in their new positions and programs. The government would agree on annual funding for each university, taking into account their particular circumstances.

Given the Commonwealth Government's financial situation, any new funding proposal needs to be budget neutral. Funding for the program could be freed up by reducing all Commonwealth

contributions (the main tuition subsidy) by \$350 per year.¹⁶⁶ Universities would be allowed to increase student contributions by an equivalent amount. On average, this would be a less than 5 per cent increase in costs to students.

This is a medium-term program to increase the speed of culture change within universities. After six years the additional funding should be phased down. The saved money from the phase-down would be available for across-the-board increases in per student funding, reduced student contributions, or new policy initiatives.

6.8 Summary of policy measures

There is no one policy measure that will produce guaranteed larger improvements in university teaching. But a range of measures taken in the past have plausibly contributed to better learning environments. This report recommends continued refinement and extension of information about university performance, including voluntary learning outcomes tests. It is likely that dissemination of advice on improving teaching has been beneficial. New teaching-focused academic jobs would create a larger group of academics committed to putting what we know about teaching into practice, building on that knowledge, and spreading what we know to their teaching-research colleagues. The report's recommendations are summarised in table 1.

Table 1: Policy recommendations

Policy measure	Recommendation
Publication of student surveys	Support continued use of My University website to report student survey results.
Tests of learning outcomes	Support voluntary participation by universities in learning outcomes tests.
Office for Learning and Teaching	Support continuation.
Performance funding	Should not be resumed.
Regulated standards	No further extension.
Reduce student-staff ratios	Should not be funded.
New teaching-focused positions	Support 2,500 new teaching-focused academic jobs.
Demand-driven system	Maintain the uncapping of university placements.

¹⁶⁶ For full-time students. Based on 2017 estimated enrolments, and making allowance for interest costs on HELP debt and the cost of debt not expected to be repaid.

7. Conclusion

The need for good teaching in Australia's universities has never been greater. As Australian higher education expands, so too does the number of students with relatively weak academic backgrounds. With their history of high drop-out rates, they need good teachers to help them succeed in higher education.

The last big expansion of Australian higher education, in the late 1980s and early 1990s, brought similar concerns about teaching quality. Governments in the 1990s and 2000s responded with a range of measures, including student surveys, commissioning and disseminating research on teaching, and performance funding. Universities also recognised that they needed to improve. They introduced regular surveys of student satisfaction, offered staff training in teaching, and incorporated teaching criteria into promotions policies. New technologies increased communication between staff and students.

The changes have undoubtedly been for the better. The Course Experience Questionnaire sent to recent graduates shows steady increases in satisfaction with teaching since the second half of the 1990s. Yet the CEQ and AUSSE questions examined in this report show that a significant minority of students are dissatisfied with aspects of their experience, or see room for improvement.

International comparisons are complex, but American students rate every aspect of their educational experience more highly than their Australian contemporaries. Despite this, many commentators

in the United States believe they have an under-performing higher education system. They can do better, and so can we.

A range of specific things could be improved in both countries. Chapters 1 to 4 describe what needs to be done differently at the institutional level, and chapter 6 describes policies that would encourage their adoption.

The deeper problem is that higher education teaching has never been professionalised. Universities and academics have not taken responsibility for teaching in the way they did for research. Unlike in schools, there has been no requirement or even strong expectation that academics undertake formal training in teaching. Academics typically do not voluntarily take responsibility for monitoring or improving each other's teaching. Surveys suggest that most academics teach in isolation, without drawing much on the advice of colleagues or other professional networks. In occupations that have been professionalised, formal and informal codes of practice and behaviour help maintain standards, quality and ethical treatment of clients.

Building a profession means ongoing culture change within universities, building on the improvements to date. Much of this has to come from within the academic profession itself – all successful professions have a high degree of self and peer monitoring. But it is only going to occur within an institutional context where staff feel that teaching effort will be recognised and

rewarded. Staff surveys suggest that academics don't currently believe they get enough recognition for their teaching.

Within the universities, research brings prestige and promotion much more than teaching. Yet our analysis of low- and high-research environments finds that, in most cases, research activity cannot explain differences in student learning environments. On this evidence, the occasionally suggested idea of encouraging some universities to be teaching only would not necessarily improve the student experience. Simply doing little research is no guarantee of good teaching. Teaching needs to be professionalised whether or not universities co-produce research.

This report's proposal for teaching-focused academic positions is not a cure-all. It is a medium-term policy to help change the culture of universities in favour of teaching, and to draw into higher education potential teachers excluded by the current system. It would be part of a suite of existing pro-teaching policies, including the Office for Learning and Teaching, the demand-driven system for allocating student places and information on university performance.

Policy pressures to improve teaching are necessary, but professionalisation should be the long-term goal. Teaching and learning are complex activities where expert judgment is needed. There are known good practices but no formulas that are right for every circumstance. Professionalisation can also help avoid detailed regulation. The high compliance costs associated with TEQSA auditing could be avoided if we had more trust in

academics and universities.

How would we know that professionalisation had occurred? Teaching would be an equal partner with research. It would mainly be done by academics with appropriate training, and not a sometimes under-prepared casual workforce. Academics would be as likely to join a professional association that aimed to protect student interests as a union that represents staff interests. Teachers would be eligible for promotion based on their teaching, and this would routinely happen. Student surveys would find much more positive reactions to teaching than they do today. For all the improvements of the last 20 years, we still have a long way to go.

8. Glossary

ACER	Australian Council for Educational Research	ERA	Excellence in Research for Australia
ALTC	Australian Learning and Teaching Council	FSSE	Faculty Survey of Student Engagement (USA)
ARC	Australian Research Council	FTE	Full-time equivalent
ATAR	Australian Tertiary Admission Rank	GCA	Graduate Careers Australia
AUSSE	Australasian Survey of Student Engagement	NSSE	National Survey of Student Engagement (USA)
CEQ	Course Experience Questionnaire	OLT	Office for Learning and Teaching
DETYA	Department of Education, Training and Youth Affairs (Australia, predecessor to DIICCSRTE)	SSES	Staff Student Engagement Survey
DIICCSRTE	Department of Industry, Innovation, Climate Change, Science, Research and Tertiary Education (Australia)	TEQSA	Tertiary Education Quality and Standards Agency
EFTSL	Equivalent full-time student load	UES	University Experience Survey

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