

# Universities New Zealand - Submission on the Draft Productivity Commission Report

November 2016

## A. Introduction

The draft report is fundamentally flawed in a number ways. It reads as if the Commission started with a vision about what they thought the tertiary education system should look like (deregulated and market-driven), and then selectively reverse-engineered their analysis and cherry-picked their evidence to support their recommendations. To compound this, the Commission does not give any consideration as to what would happen to the quality, effectiveness, and cost of the current system if the recommendations were implemented.

We were particularly surprised and disheartened that nowhere in the report do the authors acknowledge that the New Zealand university system is actually highly effective and efficient by international standards. As outlined in our submission to the Productivity Commission's Issues Paper, NZ graduates have high employment rates and relatively low levels of under-employment (employment in jobs that probably don't require degrees). Completion rates are among the best in the world with participation rates that are broadly in line with other wealthy OECD countries. All indicators suggest our teaching is good and our qualifications are highly regarded. Yet, we are doing this at approximately 75% of the funding per student compared with Australia and 55%-60% of the funding per student of countries like the US, Canada and United Kingdom (There is more information on funding in another section of this submission).

At present the Report (a) identifies a problem, (b) suggests the reason why the problem exists, (c) suggests a reason why the problem hasn't been solved so far, and (d) usually makes a recommendation to address the problem. Looking at each in turn;

- (a) Problems are usually (but not always) identified correctly and supported with good evidence. The Productivity Commission is often on firm ground here.

- (b) Looking just at the university sector, when the Commission ascribes a possible reason as to why the problem exists, it tends to favour explanations that characterise the sector as being some combination of (i) complacent, (ii) conservative, or (iii) unwilling to respond.
- (c) It then suggests that the reason why the problem hasn't been solved is because the sector hides behind legislative protections that allow it to operate like a cartel.
- (d) It then recommends that the best solution is deregulation and increasing competition.

The evidence that is provided about (b) the reason for the problem, and (c) why the problem hasn't been solved to date is presented by selectively quoting some submissions or by selectively (and uncritically) using examples that support the Commission's view point. We are extremely disappointed that the Commission does appear to have made any serious effort to locate evidence to support their assertions and, as a consequence, there are significant errors.

For example;

1. **The NZVCC and CUAP inhibit innovation, perpetuate existing teaching models and are slow and overly process-driven.** The Productivity Commission did not approach CUAP for actual performance data. If they had, they would have found that there is no evidence to support these views. According to the evidence:
  - a. 100% of requests put through under urgency were completed in significantly-truncated timeframes.
  - b. 22% of proposals put to CUAP in the past three years were amended with nearly all the amendments being the submitters providing additional information or clarifying programme regulations, graduate profiles, course titles, course descriptors or course schedules. No programmes were amended (or opposed) because they were innovative, or because they needed to be brought in line with other existing teaching models. Some proposals were opposed or amended because their names were too similar to other dissimilar qualifications and there was potential for confusion among students and employers.
  - c. A significant number of new teaching models and qualifications have been implemented over the past three years – including 180 point masters, ICT Graduate Schools, and new models of delivering initial teacher education. All proceeded successfully through CUAP.
  - d. 99.7% of proposals put to CUAP in the past three years were approved.

We note that the Commission's report doesn't identify any quality issues with the current university system.

We think that if the Commission examined CUAP decisions over the past 5-10 years, they would find that the vast majority of effort has been on managing risk to students to ensure they are likely to receive high quality teaching and a qualification that is useful and valued by employers.

We suggest that there are two types of innovation that the Commission may want to differentiate between. These are:

- Sustained innovation – where existing models undergo continual improvements in ways that minimise risk to students but that improve access, demand, completion, employability, efficiency, etc.
- Disruptive innovation – where new models (like MOOCs) are introduced to disrupt or replace existing models, but where there is likely to be considerable uncertainty as to student outcomes until several years after the first cohort of students have graduated.

The current quality assurance system does not prevent disruptive innovation, but it does rightly discourage anything that is likely to create significant risk that a student wastes years of their lives and many thousands of dollars in fees for what could be poor or sub-optimal outcomes. CUAP manages sustained innovation without difficulty, but rightly applies a student-risk lens in considering more disruptive innovation.

2. **Research-informed teaching.** We agree with the Commission’s observation that it is unusual to have a legislative provision that links teaching and research, but we disagree with the analysis that says there are many (or any) comprehensive universities internationally that don’t have the majority of their teaching staff as being research active. By international standards, we see the legislative requirement as a major strength of the New Zealand university system (much in the same way that we see the legislative protection to academic freedom as a major strength of the New Zealand system).

Although it is commonly assumed that research competes with teaching in a university environment, the main meta-study in this area (Hattie, 1996<sup>1</sup>) found that there was little support for this view. In fact, there are positive benefits at individual, discipline and institutional levels for university teachers to be research active. For students, these benefits include increased levels of engagement and understanding arising from participating in research and increased employability.

Hattie did not recommend that the relationship between teaching and research should be abandoned, but suggested that the goal should be to adopt strategies that leverage off linking them. This could be through teaching that is;

- a. research-led – where students are taught research findings in their field of study;
- b. research-oriented – where students learn research processes and methodologies;
- c. research-tutored – where students learn through critique and discussion between themselves and staff;
- d. research-based learning – where students learn as researchers.

Having teachers with research skills helps in producing degree-level graduates with qualifications that require capabilities such as research, problem solving, critical thinking,

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<sup>1</sup> For example; [“The relationship between research and teaching: a meta-analysis”](#). John Hattie and H. W. Marsh. 1996.

critical reasoning, etc. These skills are important in almost any sector that employs degree-level graduates.

The two examples of teaching-only institutions that are cited in the Productivity Commission report are not particularly good ones.

Notre Dame in Australia is NOT research active in 5 of 22 fields of study offered (per the claim in the draft report). It is research active in 5 of 22 fields possible for submission to the ERA (Excellence in Research for Australia) and those also happen to be the five fields it teaches in.

Similarly, Williams College in the US is an undergraduate college only that has just 2,000 students and a staff student ratio of 7:1. It boasts on its website: *“Teaching and research come together here in a way that’s unusual, in the context of a broad liberal arts education that’s all about learning to think critically and exploring an issue from many perspectives. At Williams, undergraduates carry out research that at other places is done by graduate students. They actually contribute meaningfully to the creation of new knowledge.”*<sup>2</sup> 80% of Williams graduates go on to graduate-schools to earn an advanced degree. It is regarded as an elite school – accepting just 17% of applicants and charging tuition fees of US \$51,490 annually.

We agree that the US has many undergraduate and community colleges that are predominantly teaching-only. We would support the argument that perhaps NZ would benefit from treating ITP degrees as something more akin to a US teaching-only undergraduate or community college and make it clear that their qualifications develop (or weight differently) different skills and competencies from those offered by universities. But we also caution that on the basis of teaching-only schools in the US, this alternative model will be much more expensive than the current university model in New Zealand.

Similarly, we are surprised that the Productivity Commission made recommendations such as (a) introducing more credit-transfer and recognition of prior learning arrangements, (b) creating a student education account (voucher-like) scheme, and (c) introducing a more deregulated market-driven model, given the challenges and weaknesses of such systems based on overseas experience. For example;

1. **Student education account** – there is extensive international literature on the failure of learning entitlement systems. Australia introduced a broadly comparable scheme in the 2000s and abolished it in 2012. The Centre for Higher Education and Policy Studies published a report on learning entitlement schemes in Australia, Colorado, Germany and the Netherlands in 2007<sup>3</sup>. It found:
  - a. Learning entitlement systems assume it is possible to provide learners with high quality information on likely outcomes from different education and study choices

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<sup>2</sup> <http://www.williams.edu/academics/research/>

<sup>3</sup> Vossensteyn H & Jongbloed B, “Learning Entitlements in Higher Education”, Centre for Higher Education Policy Studies, February 2007.

and that learners are willing and able to make rational choices. Neither assumption holds true in reality.

- b. The administrative burden and cost of operating learning entitlement systems is extremely high – tracking students over their entire working lives as they draw down their entitlement and in gathering and providing information to inform choices.

2. **Credit transfer, recognition of prior learning and articulation/pathway agreements.** Again, there is significant international research and analysis around international practice and its effectiveness<sup>4</sup>. New Zealand currently lags somewhat behind many other countries by not having clear nationally agreed policies and standards, but international evidence says they can undermine student outcomes if poorly designed or operated. Specifically, international evidence suggests:

- a. Overly generous credit transfer arrangements can negatively impact on the cohesiveness of a programme of study resulting in students with qualifications that do not accord with expected graduate outcomes;
- b. Reduced focus on the integrity of qualifications (including coherence and depth) can weaken institutions' responsibility for the quality assurance of a student's entire qualification reducing accountability and imperatives for improvement;
- c. Highly prescriptive credit transfer arrangements, rather than ones approved on a case-by-case basis, can lock students into advancing quickly through pathways without acknowledging their individual needs and preferences for graduated learning and failing to acknowledge the additional transition support needs of transferring students (including their impact on non-transferring classmates).

3. **Introducing a more deregulated market-driven model.** There is considerable analysis internationally regarding the challenges of profit-driven providers operating in the tertiary education space. We recommend Stefan Collini's "Sold Out" [<http://www.lrb.co.uk/v35/n20/stefan-collini/sold-out>] as a useful high level summary of these challenges. They include:

- a. Large numbers of people from least advantaged parts of society are stuck with large debts – having enrolled in and dropped out of programmes that were not suitable for them or particularly valuable in the long term.
- b. Private providers are more likely to focus on high margin parts of the education market, and go for low cost high volume products. Around 20% of annual revenue is distributed back to owners as profit.
- c. They are more likely to produce graduates with qualifications that are less valued by employers.

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<sup>4</sup> Universities NZ has carried out a literature review and will share this on request.

Overall, where recommendations are made for addressing problems, a range of options should be considered alongside national and international evidence. There is nothing in the report that hasn't been attempted or that isn't operating somewhere in one form or another. Given this, the report needs to critically consider that prior experience and examine the trade-offs and unintended consequences for each of the recommendations. For example, how do you maintain quality and cost in a deregulated market-driven environment where international evidence suggests private market providers tend to gravitate to lower value, high margin teaching?

## B. Setting the Scene

Before considering the specific views of the Productivity Commission's draft report, the following background points and principles provide a context for our submission:

### (1) The need to balance a range of needs and expectations

The New Zealand university sector has to balance a range of expectations from its key stakeholder groups. In no particular order, the stakeholder groups include; students, parents, taxpayers, iwi, professional bodies, employers of graduates, the government, the communities in which universities exist, the industries that use and build upon knowledge generated within universities and the academic staff, disciplines and communities that underpin all aspects of a university.

The main needs are:

1. Broadly matching the supply of educated graduates to the opportunities and needs of a society that needs a continually evolving mix of skills and capabilities.
2. Developing student capabilities and skills in an engaging, supported, pedagogically sound way so they are more likely to complete their qualification successfully and be prepared for successful jobs and careers.
3. Attracting the students who are not just defaulting to enrolling in their nearest university. 45% of students enrolling in NZ universities come from addresses outside the university's region. These students have choices for most subjects and the student experience and perceived value of the education and qualification being offered are important.
4. Working with industry and society on real world problems to generate and/or transfer the generation of high-quality relevant knowledge.
5. Supporting internationalisation objectives. This includes attracting international students and generating \$1 billion a year for the NZ economy. It also includes helping New Zealand develop global networks at a people to people level and research level.

Any significant change aimed at lifting performance or improving outcomes in any one of the areas above needs to be considered alongside unintended trade-offs or consequences for the other areas.

For example, in this multi-decade period of massification of tertiary education, approaches that are overly focussed on putting students at the centre of purchasing decisions ignores the fact that taxpayers cover the majority of the costs of education and Government can and should expect supply of

graduates to broadly match demand and for graduates to be broadly employable so there is a long term return on tax-payer investment.

We agree that students should be informed consumers - able to expect high quality teaching and good graduate outcomes. But, we also believe that they need to develop skills and capabilities that align with the expectations of employers and that qualifications should be a signal that a student has met agreed national and international standards. Those standards are, and should be, different for different forms of higher education. Any focus on outcomes must also properly acknowledge (1) that there are both private and public/societal benefits and returns from education and (2) given the time lag between investment and outcomes, there will always be imperfect information for decision-making, regardless of a plethora well-meaning attempts to plug that gap.

## (2) What do we think the university system will look like in ten years' time?

No one can say with any certainty what the national or international university system will look like in ten years, but there are some things that we think are likely:

1. Demand for degrees by school-leavers will keep growing. Automation of a range of more routine tasks will mean the best earning and employment prospects will remain with educated workers providing complex hard-to-automate services. The number of entry-level jobs requiring a degree-level qualification will continue to grow as employers demand ever-more productive, flexible and innovative employees. The vast majority of academically-capable students and their parents are going to continue to understand that gaining a degree following their schooling will open more doors and have a better payback than entering the workforce at a lower level and getting qualifications later at the point when they may need them.
  - a. The number of adults (aged 25-64) with a bachelors degree or higher rose from 8.3% in 1991 to 29.8% in 2015<sup>5</sup>.
  - b. 38% of young people who left school in 2007 or 2008 started university within 5 years<sup>6</sup>.
  - c. On average, only 2% of university graduates are unemployed 3 years out from study compared with 14% for people with school level qualifications only and 6-10% for qualifications at levels 4-6 only<sup>7</sup>.
  - d. For graduates aged 29–38 at the time of the 2013 Census, 88% were in jobs that either needed a specific degree (doctor, teacher, etc) or for which a degree was highly useful (general manager, consultant, policy advisor, etc)<sup>8</sup>

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<sup>5</sup> [http://www.stats.govt.nz/browse\\_for\\_stats/snapshots-of-nz/nz-progress-indicators/home/social/adult-educational-attainment.aspx](http://www.stats.govt.nz/browse_for_stats/snapshots-of-nz/nz-progress-indicators/home/social/adult-educational-attainment.aspx)

<sup>6</sup> From an unpublished data extract provided by the Ministry of Education to Universities New Zealand.

<sup>7</sup> From the Ministry of Education's published 'What Young Graduates Earn When They Leave Study', 2014.

<sup>8</sup> Universities NZ, Graduate Return on Investment Study – unpublished, February 2016.

- e. 47% of jobs in the 2013 Census, if they were advertised today, would be likely to either favour or require applicants to have degree level qualifications<sup>9</sup>.
2. Therefore, the proportion of adult learners pursuing degree-level education may actually continue to decline as more people choose to get their degree straight out of school (e.g., there will be fewer and fewer people reaching mid-career without a degree, but finding they need one).

However, we also think:

- a. A small number of larger employers with generous professional development policies will be interested in UK-style degree apprenticeship programmes where employees earn degrees in the workplace. This will be a useful, but niche, solution to adult education.
  - b. A number of adults may find they need to retrain if technology or the business environment makes their skills obsolete. They are more likely to seek short content-specific modules aligned to their training needs (IT skills, project management skills, programming, technical writing etc.) rather than pursuing a full higher education degree. Growing demand for adult education is likely to be in completing post-graduate qualifications or for taking a few select courses. Adult education demand will probably not be at the undergraduate degree level.
3. The majority of degree-level education will remain campus-based. Student satisfaction, retention, and completion rates will remain significantly higher for campus-based learners. Professions such as medicine, law, teaching, and engineering will continue to employ graduates trained predominantly in a campus-based environment.
  4. Technology will continue to expand into every aspect of campus-based teaching and learning. Research shows that student satisfaction and achievement rates are significantly higher in a well-designed blended-learning environment. Each of the New Zealand universities currently have major strengths in this area.
  5. By 2030–2038 30% of New Zealand’s population will be Māori or Pasifika<sup>10</sup> and half of the Māori population will be younger than 28 years<sup>11</sup>. For universities, this means that configurations and teaching pedagogies will need to be adapted appropriately. This may include a move to smaller teaching groups with larger emphasis on kanohi-ki-te-kanohi (face to face), and whanaungatanga (relationship building) teaching and learning environments that have been proven to work for these ethnic groups (as well as for every other ethnic group).
  6. The demand for degree level qualifications that integrate structured degree-relevant work experience will continue to grow.
  7. All university qualifications currently have a graduate profile that details the skills and capabilities a graduate will have when they complete the programme of study. All professional qualifications (law, accounting, engineering, etc.) already have employers or industry bodies feeding into these graduate profiles. There is a graduating year review which consults students and employers to

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<sup>9</sup> From analysis carried out by Universities NZ on the 2013 Census results.

<sup>10</sup> Ministry of Education, Māori Education Strategy, Ka Hikitia – Accelerating Success, 2013-2017

<sup>11</sup> [http://www.stats.govt.nz/browse\\_for\\_stats/people\\_and\\_communities/maori/maori-population-article-2015.aspx](http://www.stats.govt.nz/browse_for_stats/people_and_communities/maori/maori-population-article-2015.aspx)



confirm that graduates have the specified skills and capabilities. Competition for students, means that qualifications that are not currently associated with any one profession or industry (such as a typical BA or BSc) are likely to move to getting employer input into graduate profiles, curriculum and assessment so university colleges can demonstrate relevance and employability to potential students. Census and IDI data already indicates the industries and employers taking graduates by qualification and this will be used to assist in identifying which employers to involve.

8. An increasing proportion of courses aimed at developing or refreshing skills and knowledge (rather than degrees focussed on developing competencies and capabilities) will be offered primarily or fully on-line. However, the proportion of students completing degrees at a distance in 10 years will not be significantly different to the proportion now.
9. Tertiary education will consume an even larger proportion of the Government's budget as more people seek tertiary education and tertiary qualifications. The expectation of a public return from this investment (including through export education earnings) will remain high and, assuming a broadly unchanged economic environment and political landscape, Government will still be operating in a highly directive way – minimising cost, maximising quality, and maximising outcomes – both at the level of individual students and in ways that drive broader economic and social performance.

### (3) It's all about the funding system!

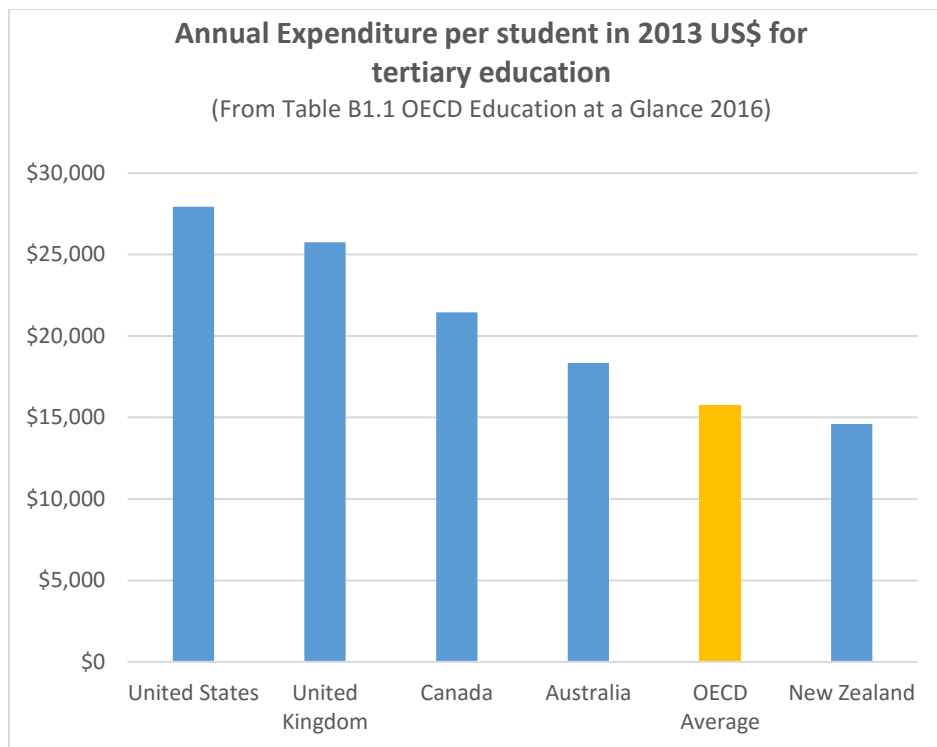
The current funding system has three features that should be kept in mind when considering future options.

First, (but oddly not mentioned by the Productivity Commission) funding per student is relatively low relative to the countries or regions we most commonly compare ourselves against.

This can be seen in the following graph<sup>12</sup>.

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<sup>12</sup> Note that the OECD average figure includes a range of countries that NZ does not traditionally compare itself against – including Indonesia, Colombia, Mexico, Brazil and Turkey.



Second, (as mentioned by the Productivity Commission) Student Achievement Component (SAC) funding is given on an inputs basis – most commonly informed by the number of hours delivered, the level of delivery and the subject/discipline area. The funding is the same whether you are a small regional ITP delivering a predominantly teaching-only undergraduate course in accountancy, or a large urban university delivering a research-informed course in the same subject at the same level. We do acknowledge that some PBRF funding is used to supplement SAC funding – particularly with regard to teaching at postgraduate level.

Third, (but not mentioned by the Productivity Commission) SAC funding rates were largely set when the SAC funding system was introduced in the early 1990s. Funding rates were set based on an assessment of reasonable costs determined by looking at how teaching was delivered at the time. When subjects had work-experience practicums (like engineering, medicine and teaching) the cost of these practicums was built into the SAC funding cost category. When subjects did not have practicums (like the arts, sciences and commerce), funding was set at a lower level to reflect that.

SAC funding rates have been adjusted periodically, but adjustments are done based on benchmarking of actual current costs which are driven by the prevailing business model. This creates a chicken and egg problem – where universities can't, for example, mainstream practicums for arts students (per the University of Waterloo model) without a general increase in SAC funding or finding a significant source of funding somewhere else (by, say, increasing domestic tuition fees where a premium non-standard product is on offer). Repeated university experience with internships and industry/project enabled work has proven how resource-intensive these programmes are to establish and to maintain – while also proving how valuable they can be to students and their eventual employers. However, there is no offset in additional revenue or reduction in existing cost structures for such value-added schemes.

Together, these three elements limit innovation and differentiation by universities as to what can be done within current SAC funding levels or to initiatives that are subject to additional targeted funding.

The Productivity Commission identifies a number of models that are operating internationally that they suggest would be good to see operating here in New Zealand. They are listed below along with the University sector’s view as to why they are not currently in place in New Zealand.

Model cited by the Commission	Why the model is not here at this time
<p>1. Degree-integrated work practicums / internships across all qualifications (per University of Waterloo)</p>	<p>Only possible under the current funding environment with an increase in SAC funding or a significant cut in costs elsewhere. The University of Waterloo, for example, charges CAN\$676 plus marking fees per co-op module of which students can do up to six modules in a degree. Also, employers get a tax credit of up to \$3,000 per work placement.</p> <p>The University of Waterloo’s charges to students cover;</p> <ul style="list-style-type: none"> <li>• Co-op related activities costs</li> <li>• Recruiting potential employers.<sup>13</sup></li> <li>• Organizing and scheduling job interviews.</li> <li>• Preparing students for work-terms.</li> <li>• Job search training and career guidance.</li> <li>• Résumé preparation counselling.</li> <li>• Discussing job options and locations.</li> <li>• Monitoring co-op student work-terms, including work site visits.</li> <li>• Interacting with the university faculties about student and employer concerns.</li> <li>• Validating jobs are suitable for co-op credit.</li> <li>• Maintaining co-op student and employer records.</li> <li>• Under Ministry of Training, Colleges, and Universities regulations, the fee can cover the following expenses: <ul style="list-style-type: none"> <li>○ salaries and benefits of staff who assist students in finding employment</li> <li>○ travel, telephone, mail, printing, copying, publicity, computing, equipment, furnishings, supplies, and external meetings</li> <li>○ maintenance costs (utilities, custodial and security services) of space for employees and employers.</li> </ul> </li> </ul>

<sup>13</sup> International research found that “nearly half of those interviewed reported that process of finding placements had been more labour-intensive and time-consuming than they had expected. More investment of time and resources is required in order to ensure that what is essentially an extremely innovative approach to the management of labour market change can be implemented piecemeal”. “The Impact of Graduate Placements on Businesses in the South West of England: a longitudinal study to run alongside the Graduates for Business Project” Gaby Atfield, Kate Purcell and Terence Hogarth. 2009. [https://www2.warwick.ac.uk/fac/soc/ier/publications/2010/atfield\\_et\\_al\\_2010\\_swrda.pdf](https://www2.warwick.ac.uk/fac/soc/ier/publications/2010/atfield_et_al_2010_swrda.pdf)

Model cited by the Commission	Why the model is not here at this time
<p>2. Degree apprenticeships where degrees are delivered to employees in the workplace with curriculum and assessment co-designed by academics &amp; employers. (Per the UK model)</p>	<p>The UK recognises this is a much more expensive way of teaching (albeit more targeted to a smaller number of students who actually need it). They allow up to £18,000 per student per year, compared with the limit for campus-based teaching of £9,000. This model receives specific Government funding – it’s not a model that’s emerged through competition or innovation within current UK Government funding settings.</p>
<p>3. A mix of workplace-based and project-based learning (Olin College of Engineering)</p>	<p>Tuition fees at Olin are around US\$51,500 a year. The model is an excellent one with very high graduation and employment rates and one that could be usefully adopted in New Zealand, but not on current NZ funding levels.</p>
<p>4. Degrees conferred through a mix of credits accumulated from various providers, and assessment of prior learning. (per the Western Governors University model in the US)</p>	<p>This model is highly problematic. Looking at Western Governors University (WGU), for example, a student can do a number of science teaching degrees (degrees that prepare you for entry into the teaching profession) at bachelors or masters level. There are no formal science qualifications (per a New Zealand BSc). There is no laboratory time for WGU students – rather the students get sent a ‘home science lab’, assessment requires the production of a written project containing original research designed to meet an identified educational (teaching) need and the exam will most likely be done through a phone conference based on a PowerPoint presentation.</p> <p>International experience has highlighted potential risks to qualification coherence and depth through allowing students to pick and mix prior and current study to a greater extent. First, this model is less suitable for the professions or other qualifications where systematic pursuit of depth is critical, including those where laboratory or workshop experience is required. This limits its applicability to many occupations. Secondly, students themselves have been outspoken against similar models as not being in their own long-term interests. For example, 2015 Educational reforms in Denmark to reduce completion times by legislating for increased prior learning and formal credit recognition have resulted in students completing with non-coherent study programmes that they believe are of little benefit to their gaining of knowledge and skills and increased prospects<sup>14</sup>.</p> <p>Fundamentally, despite the drawcard of generous credit recognition, research shows that coherence matters, not just to</p>

<sup>14</sup> Source: “Absurd study program after credit transfer”, Mike Young, 2015. <http://universitypost.dk/article/absurd-study-programme-after-credit-transfer>

Model cited by the Commission	Why the model is not here at this time
	future employability but also to completion rates. While WGU’s first year retention rates are reasonably high at 77%, particularly for what is effectively an online school, its six-year graduation rate is only 22% <sup>15</sup> .
5. Tertiary education providers focused on particular groups of non-traditional learners and lifting participation & achievement (per the Southern New Hampshire University in the US)	Again, funding needs to acknowledge that it is typically more expensive to bring non-traditional learners successfully through the school system and to support them into and through university. Southern New Hampshire University in the US has done well in this respect, but its distance education programme has the same limitations as for Western Governors University and, as a small private university it is able to charge US\$30,000 annually (NZ\$42,000) for the on-campus students it takes in.
6. Mixed model education with the first year delivered largely on-line (via MOOC) and the rest on-campus. (per Arizona State University)	<p>This is new model that has only really appeared at scale in the US in 2016. We think this model may have potential in future to complement existing channels for teaching – particularly for mature or non-local students who would like to try tertiary education before committing to it. We note that engagement and completion rates are lower for students who attempt distance education. The benefits of widening access will need to be carefully balanced with the potential to dissuade some students who would otherwise be fully capable of completing university successfully.</p> <p>Again, this model works well in a US type system, where much of what is taught at first year is foundational (they do a four-year bachelors) and where many professional qualifications are post-graduate. The use of this model would necessarily be more limited in NZ relative to the United States.</p>

We agree that the current funding model based on ensuring delivery of specified inputs (such as teaching hours) is imposing some limits on the extent to which TEOs can adopt alternative models of teaching. But, we think there will be equivalent challenges in moving to an outcomes based system where international evidence shows that providers can make a lot of money assessing knowledge and conferring qualifications, or in offering compressed qualifications (like ‘micro-MBAs’) with limited or even negative actual value added to the student.

We suggest the following:

- a. Funding levels need to remain broadly in line with the cost of delivery, but with more flexibility around delivery models. At present, SAC cost categories are applied in a very blunt way. For example, SAC Cost Category J covers any undergraduate course in areas like

<sup>15</sup> Source: “The College For-profits Should Fear”, Washington Monthly, Sept/Oct 2011: <http://washingtonmonthly.com/magazine/septoct-2011/the-college-for-profits-should-fear-2/>.

business, accountancy and law. The SAC tuition subsidy is \$6,135 and assumes campus-based delivery with a standard number of learning hours. TEC has recently been recovering funds where learning hours are below what is expected, but where graduates have all the expected skills and capabilities. Where alternative lower-cost teaching models are proven to be effective, the TEC assess average cost and provide tuition subsidies at a discounted level. Providers should be able to generate the same surpluses from different business models so long as the same broad range of outcomes are being achieved for students and employers.

- b. On the other end of the spectrum, we recommend the Government allow the TEC to fund different, more expensive forms of teaching where the model is operating successfully internationally and benefits, costs and risks are sufficiently understood. This might include work-place-based degree programmes (per the UK's degree apprenticeships), or the mainstreaming of degree-relevant work-practicums into qualifications (per the University of Waterloos Co-Op model). Funding should be provided through SAC funding mechanisms based on average course costs at all levels of the qualification, and be open-ended where results fall within agreed performance ranges.
- c. Government should encourage a degree of prudent risk where institutions are able to accept academically marginal students and achieve results that are better than the alternative (albeit below average), for example, taking in students who do not achieve University Entrance and successfully graduating more than 70% of them. The results of these students should not be included in indicators used to compare the performance of institutions.
- d. Allow TEOs to make a case for funding to pilot new models for increasing participation among priority groups, or for lifting learning/teaching outcomes. Provide funding through SAC or Equity channels, but make it open-ended and subject to review not earlier than three years after the first graduate has successfully completed the programme and outcomes analysed. Make funding available to other providers on the same basis once the model is refined, reviewed, and proven.
- e. Remove all barriers to TEOs being able to enrol students for stand-alone courses where there is no current intention of that student pursuing a full degree-level qualification.
- f. Allow for some fee deregulation where it is more likely that students are informed consumers and have market choices. This could include:
  - i. Deregulation around numbers of students and tuition fees for the post-graduate qualifications that have particularly strong employment and earnings outcomes.
  - ii. Charging interest on loans for some postgraduate qualification and/or for adult students who cannot currently access loans.

## C. What are the problems and solutions? The Universities NZ view

The table that follows takes a number of the problems and issues identified by the Productivity Commission and lists the reason the Commission cites as to why there is a problem and why it hasn't been resolved.

Alongside this information we present the view of UNZ as to;

- Whether there actually is a problem,
- A subjective score out of ten as to the severity and impact of the problem on the system's ability to deliver strong outcomes for New Zealand, and,
- Some analysis and some recommendations.

<b>(a) Problem statement/assertion</b>	<b>(b) Reasons given by the Commission for the problem existing.</b>	<b>UNZ response. Is there a problem and what is its impact/severity? What do we recommend and why?</b>
GOVERNMENT		
Strategy for tertiary education is high level and vague creating ambiguity around goals and objectives.	None	<p><b>Yes but 2/10.</b></p> <p>A relatively high level strategy permits a lot of sensible variation between sub-sectors and institutions in approaches and outcomes.</p> <p>UNZ RECOMMENDATION:</p> <p>(1) No change to the Tertiary Education Strategy, but consider sub-sector implementation strategies to assist each part of the Tertiary Education system to agree key objectives and priorities with Government.</p>
Coordination of tertiary education is complicated and split across multiple agencies leading to fragmentation, lack of cohesion and unclear objectives.	None	<p><b>Yes and 7/10.</b></p> <p>Different agencies are focussed on different outcome areas. TEOs regularly find themselves navigating between priorities that are weighted differently between agencies. The System Stewardship (PIF) Review findings &amp; response should assist if implemented as proposed.</p> <p>UNZ RECOMMENDATION:</p> <p>(2) Implement the System Stewardship (PIF) Review findings.</p>
Tertiary system not innovating or differentiating enough.	<p>All system policy, funding and operating levers are overly locked down by Government.</p> <p>Government has too much control</p> <p>Monitoring &amp; compliance arrangements are slowing down tertiary providers.</p>	<p><b>Yes and 8/10.</b></p> <p>We agree that some aspects of the funding system are too locked down and providers should be funded more and/or able to charge more for models that have higher value-add and higher cost.</p>



<b>(a) Problem statement/assertion</b>	<b>(b) Reasons given by the Commission for the problem existing.</b>	<b>UNZ response. Is there a problem and what is its impact/severity? What do we recommend and why?</b>
Relatively homogenous range of providers and offerings to students.	Government funding settings mean that all providers get the same funding regardless of where, what and how they teach and how much value they add.	UNZ RECOMMENDATIONS:  (3) Consider the options around improving the funding system outlined in section B(3) of this submission.  (4) The Productivity Commission should consider what other levers (than deregulation and increased competition) have worked internationally in driving innovation. Some potential models to include might be Scotland – which has a particularly strong student-focussed model for driving sustained innovation. We would also suggest looking at Scandinavian countries who have generally been leading the world in innovative models for several decades – but within an environment of much higher Government funding and very different policy settings. New Zealand universities have been watching these countries closely and have rapidly adopted (or adapted from them) where they have generated ideas that have been both effective and affordable within current NZ funding levels.
Tertiary system has not developed some international teaching models that may be driving better learning outcomes for students. (degree apprenticeships, mainstreamed work practicums, programmes focussed on lifting numbers of non-traditional learners, use of MOOCs, work-based and/or project-based learning)	Highly regulated environment combined with Government funding settings, means no incentives for TEOs to innovate or compete by adopting these sorts of models.	(5) Proceed with TEC-proposed plans to move to more of a risk-based monitoring & control environment (relatively light touch for well-managed institutions with good processes & results).
Institutions cherry-pick the best students and avoid priority groups where costs and chances of failure are higher. Institutions not adding value (for example, turning 'C' students into 'B' students, and/or recruiting and successfully educating more Māori and Pasifika).	Funding incentives reward successful completions. Funding is pretty much the same whether institutions turn 'A' students into 'C' students or 'D' students into 'B' students and/or whether institutions take students that are less cost and lower risk to education (A student) or higher cost and higher risk (for example; Māori, first-in-family,	<b>Partially and 4/10.</b>  NZ universities compete strongly for both domestic and international students and do so on claims of the quality of teaching and strong graduate outcomes. The Productivity Commission notes correctly that students cannot reliably ever know the quality of the education they receive until they have completed (or if ever), but as public institutions with funding set based on broad student outcomes, there are some proxies that support the claims around teaching and graduate outcomes.

<b>(a) Problem statement/assertion</b>	<b>(b) Reasons given by the Commission for the problem existing.</b>	<b>UNZ response. Is there a problem and what is its impact/severity? What do we recommend and why?</b>
	rural, and/or with less academic preparation.	However, the Productivity Commission is correct in noting that current funding incentives don't provide any strong incentive for adding value.
<p>Current incentives around PBRF, mean that teaching quality can be assumed to be below the level it should be. If this is true, there are opportunities to improve teaching quality.</p>	<p>Universities are driven by PBRF and the legislative requirement to ensure teaching is 'research-informed'. This means research skills are valued over teaching skills.</p> <p>There are no measures of teaching quality or value-add from teaching.</p> <p>There are no incentives to encourage institutions to value teaching quality alongside or above research ability.</p>	<p>UNZ RECOMMENDATIONS:</p> <p>(6) Replace the existing Educational Performance Indicators with measures that better indicate teaching quality. Note that there is no one best way of delivering teaching and teaching effectiveness varies according to a range of factors such as student learning styles, learning circumstances and preferences. Because of this, there are no internationally agreed metrics that can be applied across all disciplines or sectors to determine where excellent teaching is taking place. As such measurement systems generally report two things;</p> <p>(a) the extent to which good teaching practices are in place and the level of adoption by teaching staff (elements such as student-faculty contact, cooperation among students, active learning, prompt feedback, etc) and;</p> <p>(b) Outcomes achieved (elements such as grade-point averages at the start of study compared with averages on graduation, employment rates in degree-level employment, and student rating of teaching quality).</p> <p>For a summary of thinking around the assessment and measurement of teaching quality, we recommend the Commission read 'Dimensions of Quality' published by the UK's Higher Education Academy in 2010<sup>16</sup>.</p> <p>(7) Recognise that research-informed teaching is the near universally followed standard model for comprehensive</p>

<sup>16</sup> [https://www.heacademy.ac.uk/system/files/dimensions\\_of\\_quality.pdf](https://www.heacademy.ac.uk/system/files/dimensions_of_quality.pdf)

<b>(a) Problem statement/assertion</b>	<b>(b) Reasons given by the Commission for the problem existing.</b>	<b>UNZ response. Is there a problem and what is its impact/severity? What do we recommend and why?</b>
		<p>universities internationally. Ensure that university teaching remains predominantly research-informed – particularly where learning pedagogy favours active-learning models and/or where qualifications are focussed on developing graduates with skills in problem solving, research, analysis, critical thinking and critical reasoning.</p>
<p>Tertiary system not focussed on supporting and optimising the student journey (high switching costs for students moving between institutions or qualifications).</p>	<p>There are no national policies regarding credit transfer, RPL, ability to mix and match credits from different institutions, and formal articulation agreements to support students moving between regional providers.</p> <p>Funding system is based on institutions maximising learning hours.</p>	<p><b>Partially and 5/10.</b></p> <p>New Zealand is now fairly unusual internationally in not having a national incentivised and goal-orientated framework for credit transfer. The now-outdated 2002 NZQA policy on Credit Recognition and Transfer has been eclipsed internationally by policy instruments and good practice elsewhere. Canada, some US states and parts of Europe provide some good examples. Even Australia, which still has much progress to make in this area, has a fairly simple policy that goes further than NZ in recognising that degrees have to have some coherence if they are to be useful to employers and graduates, and places an upper limit on credit transfer of about a third of a degree.</p> <p>There are a range of other legislative and policy environments operating overseas, but with a lot of local variation and mixed levels of success. We can provide a literature review on international practice on request.</p> <p>There are examples of good practice in New Zealand with universities like Waikato and Auckland starting to offer students good online tools for assessing what credit they might be able to have recognised if they were to enrol at that institution.</p> <p>UNZ RECOMMENDATION:</p> <p>(8) Strengthen RPL, credit transfer and other student switching arrangements through national policies, incentives and</p>

(a) Problem statement/assertion	(b) Reasons given by the Commission for the problem existing.	UNZ response. Is there a problem and what is its impact/severity? What do we recommend and why?
		<p>standards, but examine international evidence to ensure that qualification are likely to remain coherent in producing capable employable graduates.</p> <p>We hope that the merger of Careers NZ into the TEC will lead to the TEC becoming the lead agency for providing young people and their advisors with tools and information for making optimal study and career choices.</p> <p>We are not currently seeing thinking in the TEC that gives us confidence this is going to happen in practice.</p> <p>UNZ RECOMMENDATION:</p> <p>(9) We would suggest that the TEC develop a 3-5 year vision and strategy that looks at what study and career advice will look like from the perspective of a student and their advisor/parent and how the TEC will validate and implement this. We recommend the TEC look at licensing and adapting models that have been developed and successfully proven internationally; such as the UK's CASCAID</p>
TERTIARY PROVIDERS & PROVISION		
Quality assurance arrangements are conservative, slow, impeding innovation and encouraging anti-competitive behaviour.	<p>It takes about a year and a large number of steps to get new programmes and qualifications established through NZQA or CUAP.</p> <p>Quality assurance focussed on form (quality &amp; quantity) of proposed programmes &amp; qualification not on outcomes. Leads to homogeneous</p>	<p><b>Incorrect and 2/10.</b></p> <p>New Zealand's quality assurance arrangements were designed to ensure certainty around quality, to minimise risk around the value of education to students and to manage cost for institutions and the Crown. It was not established with an explicit goal of fostering or supporting innovation.</p> <p>NZQA was given responsibility for quality assurance across the further-education system and the NZ Vice-Chancellors Committee</p>

<b>(a) Problem statement/assertion</b>	<b>(b) Reasons given by the Commission for the problem existing.</b>	<b>UNZ response. Is there a problem and what is its impact/severity? What do we recommend and why?</b>
	offerings & lack of differentiation/innovation.	<p>(now via the CUAP sub-committee) for the university system. Statistics on the actual performance of CUAP are provided earlier in this paper. We think that sensible fine-tuning can continue to take place to ensure processes are streamlined, can balance innovation with a need to ensure graduates end up with a useful qualification and to ensure individual universities are able to differentiate themselves.</p> <p>UNZ RECOMMENDATIONS:</p> <p>(10)CUAP has a planned review taking place at the start of 2017. The Vice-Chancellors propose to take this opportunity to review what more can be done to improve the timeliness of CUAP proposals and to ensure CUAP processes are optimised so they do not undermine or inhibit competition, innovation or differentiation.</p>
Tertiary education institutions have un-needed buildings and capital programmes.	Institutions are actually generating much larger surpluses than appears to be the case on paper, but are hiding it in unnecessary building programmes.	<p><b>Incorrect and 0/10.</b></p> <p>We suggest the Commission engage with universities to get better information on where, how and why they are investing in physical and electronic infrastructure. They will not find evidence of surpluses being directed away in unnecessary infrastructure. They will find that capital works are being entered into to replace aging building stock that is increasingly uneconomic to operate (due to seismic issues, asbestos and other health &amp; safety challenges), or that is unable to support modern teaching and research models, or they will find that universities are responding to changing patterns of demand (e.g., fewer people doing arts degrees and more doing STEM – requiring more laboratories &amp; workshops).</p> <p>There are few reliable international benchmarks, but NZ universities do compare themselves with the Australian university sector. In general NZ universities have less capital, similar levels of</p>

(a) Problem statement/assertion	(b) Reasons given by the Commission for the problem existing.	UNZ response. Is there a problem and what is its impact/severity? What do we recommend and why?
		<p>space utilisation and similar amounts of space per student and staff member as comparable universities in Australia.</p> <p><i>See the Appendix for additional information.</i></p> <p>UNZ RECOMMENDATION:</p> <p>(11)The Productivity Commission should seek actual <u>evidence</u> to support their assertion that the tertiary sector is building unneeded infrastructure to hide surpluses.</p>
<p>Government regulations prevent new entrants from entering the NZ tertiary education market and existing players from moving between categories (for example, Wānanga becoming universities).</p>	<p>Education Act creating (unnecessary) barriers.</p>	<p><b>Incorrect and 2/10.</b></p> <p>Any private or international education provider can currently apply to the Minister to enter the NZ education market as a university. The legislation currently prevents a Wānanga or ITP from applying to use the term ‘university’, but the Tertiary Education Act Amendment Bill proposes to amend that. NZ universities hope that future Ministers will exercise that power very carefully given the value of a strong university brand to New Zealand internationally. We don’t currently see any significant impediments for providers wanting to enter the NZ market other than the fact that current providers are high quality and available funding is relatively low by international standards.</p>
<p>System driven by back-channel lobbying and cartel/monopoly type behaviour.</p>	<p>Entities such as the NZ Vice-Chancellors Committee have their market position protected by legislation.</p>	<p>Universities NZ is a statutory body. UNZ reflects this by providing the majority of its advice and thinking through formal channels and by working with and through officials.</p> <p>UNZ RECOMMENDATION:</p> <p>(12) Do nothing.</p>

## Appendix – University Sector Built Infrastructure

The university sector began in New Zealand with the establishment of the University of Otago in 1869. The sector began its first period of major growth in the years following the Second World War when New Zealand (and most other developed western countries began to offer open fully subsidised access to university for everyone). Many of the larger buildings on New Zealand university campuses were constructed by the Ministry of Works during the 1950s, 1960s and 1970s.

These buildings have, in many cases, been poorly maintained and/or are no longer fit-for-purpose. They were constructed at a time when seismic standards were lower, when asbestos was commonly included as a building or insulation material, and when fire regulations were lower or non-existent. In addition, the increasing demands of technology mean that many of the buildings are unable to provide sufficient mechanical air systems, energy, etc. As a result, the sector currently faces significant capital reinvestment requirements and capital maintenance challenges.

Student numbers continued to grow from the 1980s onwards, but construction of new buildings had come under the control of universities by the end of that decade. In 1992, 8% of the population had a university degree. In 2014, 28% of the population had a university degree and 38% of young people were starting university within five years of leaving school.

Teaching pedagogy has evolved extensively over the past fifty years and this has been reflected in changes in design and the ways buildings are occupied and fitted out.

Because of both trends, universities have had to be forward looking in their building programmes. Typically, it takes around five years to bring a significant new building from initial business case approval to operation. And, universities are typically planning for 50-100 year lifetimes when investing in these buildings.

A project analysing the floor area provided in buildings at New Zealand universities was undertaken in 2015 on behalf of the Directors of Facilities Management with five of the eight universities participating in the study. The information below has been taken from that study.

The following terms and acronyms are used in this section:

<b>Faculties</b>	Includes colleges or divisions as nomenclature for the highest academic grouping varies by university
<b>General teaching rooms:</b>	tiered and flat-floored lecture theatres, case rooms, seminar rooms, tutorial rooms, classrooms, group learning rooms etc, of a general nature.
<b>GFA</b>	Gross floor area
<b>TAFE</b>	Technical and Further Education institutes (Australia)
<b>TEFMA:</b>	Tertiary Education Facilities Management Association, an association of tertiary institutes across Australia and New Zealand of which the participating universities are members.
<b>TEFMA guidelines:</b>	TEFMA Space Planning Guidelines, Edition 3, revised in 2009.

**UFA**

Usable floor area. Excludes wall thickness and building service areas such as ablutions, circulation space and plant rooms.

The space provided per EFTS varies considerably between the eight New Zealand universities and, to a lesser extent, by year at each university, as student numbers fluctuate and new buildings are constructed or existing buildings sold or demolished. Using total gross floor area (GFA) or total usable floor area (UFA) per EFTS as a measure of space provided is however a poor indicator for comparing space provided across the universities as it does not take into account the different academic programmes provided at each university and therefore a comparative study of the space provided at the universities was undertaken in 2015 to provide insight into the variation between universities with five of the universities providing data for this study.

As the academic structure at each university and the programmes offered by them differ significantly, the space and academic categories provided within the TEFMA Space Planning Guidelines have been used as the basis to analyse information provided by the participating universities with each university aligning their academic units with the 12 broad academic categories provided within the TEFMA guidelines. Note that the comparisons between universities in this report are based on UFA not GFA as information provided in an earlier study undertaken in 2010 showed significant differences at the universities between the types of space included in the service areas that make up the difference between UFA and GFA and in the treatment of wall thicknesses.

Table 1 summarises the total space allocated to the various academic categories, including faculty-managed facilities, and non-academic functions together with the average of space provided across the five participating universities, the highest and lowest allocations at individual universities, and the TEFMA norms provided in the 2009 Space Planning Guidelines. Note that the average is a weighted average calculated by dividing the space provided for each space category in total across the universities by the total EFTS within the category.



**Table 1: Usable floor area provided**

	Total UFA	% of UFA	Weighted Average	Highest	Lowest	TEFMA 2009 Guide-lines
	Sq mtrs		m <sup>2</sup> /EFTS	m <sup>2</sup> /EFTS	m <sup>2</sup> /EFTS	m <sup>2</sup> /EFTS
<b>Academic space</b>						
Architecture	12,265	1%	5.41	5.46	5.32	8.00
Commerce	30,778	4%	1.62	2.31	0.89	1.30
Creative Arts	26,083	3%	5.80	6.79	4.72	6.10
Education	34,936	4%	4.15	6.37	1.47	3.70
Engineering & Related Technology	47,155	6%	7.63	9.57	4.37	6.70
Health	112,965	13%	7.21	10.26	2.72	14.00
Hospitality	4,043	0%	2.27	2.27	2.27	6.50
Information Technology	16,550	2%	2.97	5.28	2.01	4.50
Natural & Physical Science	88,875	10%	7.87	15.99	3.92	8.00
Society & Culture	58,398	7%	2.56	3.68	2.17	2.10
Mixed Fields of Study	560	0%	7.47	7.47	7.47	n/a
<b>Total Academic space</b>	<b>432,609</b>	<b>51%</b>	<b>4.43</b>	<b>7.01</b>	<b>2.74</b>	
<b>Non-academic facilities</b>						<b>(average)</b>
Central Admin	78,069	9%	0.80	1.19	0.47	1.12
General Teaching <sup>17</sup>	98,831	11%	1.01	1.22	0.87	0.93
Library & Study	84,327	10%	0.86	1.38	0.42	0.90
Research	6,735	1%	0.07	0.17	0.03	
Staff & Student Services	57,671	7%	0.59	0.83	0.24	0.57
Commercial	41,113	5%	0.42	0.64	0.17	0.51
Vacant or undergoing refurbishment	41,808	5%	0.42	0.67	0.08	
Other	14,044	2%	0.14	0.27	0.04	0.75
<b>Total Non-academic Facilities</b>	<b>422,597</b>	<b>49%</b>	<b>4.33</b>	<b>5.83</b>	<b>3.88</b>	
<b>Total Usable Floor Area</b>	<b>855,206</b>	<b>100%</b>	<b>8.77</b>	<b>12.84</b>	<b>6.87</b>	

As the study that gave rise to the above information included only five of the universities the information may not be representative of the sector as a whole. The following information based on the 2014 TEFMA benchmark report summarises the total UFA and the New Zealand weighted average UFA per EFTS across the eight universities, providing an indication of the impact of the three universities that did not participate in the study:

<sup>17</sup> General teaching refers to lecture theatres, seminar rooms, tutorial rooms etc of a general nature and includes rooms managed by academic departments and faculties. General teaching excludes laboratories, workshops, studios and other teaching rooms of a specialised nature which are included in the relevant academic category.

**Table 2: Usable floor area provided – Total New Zealand universities**

	<b>Total UFA</b>	<b>New Zealand Weighted Average</b>
	<b>Sq mtrs</b>	<b>m<sup>2</sup>/ EFTS</b>
Total 8 New Zealand universities	1,297,210	10.0

As can be seen in table 1; for many of the academic categories there is at least one university that provides considerably more space per EFTS than the average and there could be several reasons for this such as:

- a university having a higher research emphasis within a particular field with fewer students relative to the amount of space provided, thus skewing the results of the analysis,
- the nature of the teaching or research undertaken may differ substantially compared to other universities, for example engineering ranges from heavy civil, mechanical and electrical engineering, requiring extensive laboratory and workshop facilities, through to robotics and electronics engineering which is generally more computer-based,
- the basis for teaching and learning has changed significantly compared with when the facilities were originally provided or the number of EFTS enrolling in a category have reduced over time but the space has not contracted to reflect the changes in EFTS or learning basis.

Note that the “Research” category in Table 1 does not include all research facilities but is limited to research facilities outside faculty academic structures such as stand-alone research-focused entities and research administrative offices.

Although the TEFMA guidelines have been included in Table 1, these must be seen as indicative only as they are based upon the space provided at the 34 New Zealand and Australian universities, institutes of technology and TAFEs that provided information when the guidelines were reviewed in 2008/09 and not the “ideal” space to be provided.

The actual space required at a university, especially research, teaching and other specialist facilities, must be determined based on identification of the specific requirements of the academic programmes and other services to be delivered. The TEFMA guidelines also include general teaching facilities allocated to individual academic entities in the academic category space whereas in the study undertaken across the New Zealand universities in 2015 these facilities were included in the general teaching category in the non-academic section of the above table.

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