Overview

New models of tertiary education

March 2017

The Government asked the Productivity Commission to carry out an inquiry into new models of tertiary education.

The terms of reference suggested that the tertiary education system has "considerable inertia", with tertiary providers reluctant to be first movers or early adopters in shifting away from traditional models. At the outset of the inquiry, the Commission was mindful of the importance of this alleged problem. If providers in the tertiary education system are inflexible and slow to adapt to changing circumstances, then that carries with it considerable risks for New Zealand and missed opportunities for improvement. As this Overview explains, tertiary education does have considerable inertia, but this is an emergent property of the system rather than a characteristic of tertiary education providers.

New Zealand's tertiary education system

Why does tertiary education matter?

Tertiary education improves the lives of students, and improves society. For students, education develops knowledge and skills that allow them to live an enriched life. It helps people to understand and navigate the world around them, as well as question and challenge the way things are. It creates access to opportunities, forges identity and culture, and frequently leads to lifelong benefits in terms of health, wealth and life satisfaction.

There are public benefits too: a stronger civic society, the advancement of knowledge, the preservation of cultural heritage, and the development of a skilled workforce that can contribute to productivity and wellbeing.

Tertiary education is not an ordinary consumer good. It typically combines separate services like teaching, assessment, and pastoral care and it can be difficult for a student to fully assess the quality of education provided, even after it has been delivered. Most importantly, a successful tertiary education requires considerable effort on the part of both students and teachers. In this sense, an education is "co-produced", and this has important implications for how the Commission has thought about the issues in tertiary education.

The current state of the tertiary education system

New Zealand's tertiary education system has changed dramatically over the last 30 years. The system accommodated growing numbers of students through the last decades of the 20th century. The proportion of the adult population with formal post-school qualifications, and higher-level qualifications, has grown over time. Each of New Zealand's universities is ranked in the top 3% in the world, vocational and industry training are well-regarded internationally, the wānanga subsector serves many people who would otherwise miss out on tertiary education, and the country has a diverse set of private training establishments, many of which are well-connected to employers and their local communities.

This inquiry considers how well-placed these providers are to continue to deliver successfully for New Zealand, given the risks and opportunities presented from ongoing changes in technology, demography, costs, internationalisation, and student and employer demand.

A good tertiary education system is one that meets the needs of all students. This includes school leavers preparing for their adult lives and careers, young people needing a second chance after disengaging from education, older adults retraining to meet the needs of a changing labour market, and people of all ages who want to become more educated in areas of interest to them.

The Commission finds that the tertiary education system is not well-placed to respond to uncertain future trends and the demands of more diverse learners. The system is not good at trying and adopting new ways of delivering education, and does not have the features that will allow it to respond flexibly to changing circumstances. The system does a good job of supporting and protecting providers that are considered important, but it is not student-centred. Neither does it reach out, as much as it could, to extend the benefits of education to groups that have traditionally missed out on tertiary education.

This is largely due to the high degree of central control that stifles the ability of providers to innovate. Nobody set out to design a tertiary education system characterised by inertia. But over time government has responded to fiscal pressure, political risks, and quality concerns by layering increasingly prescriptive funding rules and regulatory requirements on providers. These have the cumulative effect of tying the system down.

This report recommends changes that would improve the tertiary education system's ability to respond flexibly to future pressures or opportunities. Providers need more freedom, and incentives, to try new things. They should have greater autonomy and responsibility. Students can be more powerful in driving quality and innovation within the system.

The current system is set up to be too supply-driven, with providers more responsive to government than to students. This report recommends improvements to government's approach to funding tertiary education to allow funding to be more responsive to student demand and to reward providers for good performance in adding value to students.

Where is the system innovative? What are the possibilities?

Teachers and providers innovate – but core business models persist

The Commission finds that, across the tertiary education system, many teachers and groups of teachers are innovating, including integrating new technology into their teaching practice. Passionate professionals are trying new things. But there is a lack of system dynamism necessary for these approaches to scale up and transform education delivery.

Innovation is also happening at the provider level, but usually this delivers incremental improvements to existing ways of doing things. Providers refresh their course offerings, upgrade their Learning Management Systems, offer Wi-Fi and invest in more flexible learning spaces. Examples of New Zealand tertiary providers with significantly new and different models of tertiary education are rare. Where significant innovations do emerge in New Zealand, they do so because government removes regulatory barriers to it (eg, allowing Secondary-Tertiary Partnerships), providers can attract separate funding (eg, ICT grad schools, various programmes to encourage more young Māori into health studies) or they arise outside of the government-funded system (eg, the Dev Academy).

The Commission has seen examples in other countries of innovations that, rather than being incorporated into existing business models at the margins, have significantly reshaped how providers plan and undertake the delivery of education to students:

- providers striking out to deliver tertiary education online and through blended models that combine online and face-to-face models to previously under-served groups of students;
- cutting-edge approaches to using administrative and other data to tailor learning support to individuals; and
- the close integration of work and learning not just for vocational education, but also higher education.

None of these models would supplant existing delivery models in New Zealand. But a well-functioning tertiary education system would offer more diversity and specialisation on the part of providers, and students would be able to choose from models like these alongside more traditional options.

Better matching is possible via new models

New models of tertiary education present an opportunity to increase the diversity of delivery approaches, educational methods and learning environments available to students. In turn, this increases the opportunities for individual students to find a match that suits their needs and aspirations.

New models would also help the education system adapt to a changing society and world of work. For example, models at all levels of study that allowed students to combine education and work would improve the ability of the education system to meet the needs of employers. A wider range of models could help ensure the technical curriculum meets employers' requirements, as well as encourage the development of transferable skills such as communication and teamwork.

Inertia is an emergent property of the system

The Commission finds considerable inertia in New Zealand tertiary education, but this is an emergent property of the system rather than an inherent feature of providers. In other words, this inertia is a product of the regulatory and funding system within which providers operate, combined with the decisions of large numbers of autonomous providers and students. Though higher-ranked universities have a strong attachment to traditional ways of delivering education, many providers (across all subsectors) show an appetite for doing things differently. In many respects, the system stymies or prohibits innovations, punishes risk-takers, and reinforces existing practices.

Government control is pervasive

The tertiary education system is controlled by a series of prescriptive regulatory and funding rules that dictate the nature, price, quality, volume and location of much delivery. These controls have extended over time as a result of different financial, quality and political risks. Together they constrain the ability of providers to innovate, drive homogeneity in provision, and limit the flexibility and responsiveness of the system as a whole.

Tuition subsidies allocated to tertiary providers come with tight specifications on the nature and volume of delivery, and these limit the ability of providers to develop new or innovative offerings. Government purchases a limited range of products: it will only subsidise study towards a full qualification, and the equivalent full-time student (EFTS) funding mechanism bundles teaching, assessment, credentialing and often pastoral care. Government also tightly regulates the fees that providers can charge.

The total number of domestic student places in the tertiary education system is capped, and the proportion of total government funding that shifts between providers year to year is very small. This means that high-performing providers have little scope to grow at the expense of poor performers.

Quality assurance in the tertiary education system inhibits innovation. In the university subsector quality assurance is delegated to Universities New Zealand through its Academic Quality Agency and its Committee on University Academic Programmes (CUAP). These arrangements are not conducive to innovation and focus primarily on processes rather than student outcomes. Some of the New Zealand Qualifications Authority's (NZQA) regulatory processes are also not as enabling of innovation as they could be.

Armstrong notes that in education, ideas of quality come to be defined by existing practice:

> When an organization has been successful for a considerable length of time, the people in that organization come to believe that their value proposition defines quality in their field, and that the resources and processes used are necessary for the production of that quality… That is, the status quo of the entire business model comes to exemplify quality. (2014, p. 4)

So quality assurance processes can reinforce existing practices, rather than supporting new ones. Equating traditional models of delivery with quality also reinforces cultural resistance to change within providers.

Regulation does the opposite of what it does in other sectors

In most parts of the economy, government has an important role to play in controlling market power, limiting monopolistic behaviour, and preventing cartels. The reason for such regulation is to protect the public by facilitating new entrants, lowering prices, improving quality, and encouraging innovations to better serve existing and prospective customers.

In tertiary education, government regulates with the opposite effect: government regulations bestow market power, grant local monopolies, and require cartel structures. The results should not be surprising: significant barriers to new entrants, rising costs, and a lack of innovation in serving current or prospective students.

The result is the delivery of more "traditional" tertiary education

In recent years, students in New Zealand have become more likely to be engaged in a traditional conception of tertiary education. The average student is becoming younger and is more likely to be a school leaver. The share of full-year, full-time study is increasing. The share of intramural (on campus) study is also increasing. This is the result of:

- government's steering via the Tertiary Education Strategy, which for some time prioritised delivering education to these groups;
- the performance management regime which focuses on completions, which tend to be higher through full-year, full-time, intramural study; and
- the rationing of access to education through the allocation of EFTS, meaning that many providers can fill their quota by continuing their existing modes of delivery, and which offers no incentive for providers to try something new to reach unserved students.

A system that is educating fewer students in recent years…

Some inquiry participants noted that the New Zealand tertiary education system is both high quality and cost-effective when compared internationally. However, New Zealand's tertiary education system is still sufficiently expensive for government that it limits access to control its costs. The last two decades have seen a see-saw of iterative policy measures to first grow, then ration, participation in New Zealand's tertiary education system, as government has sought to balance access goals against rising costs.

When enrolments were uncapped in the late 1990s, the system expanded to serve the significant growing or latent demand for tertiary education, including from groups that had historically poor levels of participation. Significant quality problems occurred along the way, and the system was recapped in stages between 2003 and 2006. Subsequently, participation rates in tertiary education have fallen steadily, with more than 20% fewer domestic enrolments in provider-based tertiary education in 2015 than in 2005.

The inherent tension between expanded access and expanded public costs is tighter in New Zealand than in most other countries due to New Zealand's interest-free student loan policy. The significant costs that arise via the interest-free student loans scheme have had the unintended consequence of creating a strong incentive to constrain the supply of tertiary education. The Commission has recommended options to address this.

The system's focus on educating school leavers, full time, and on campus, means that it does not recognise demand for education from other groups who would be well-served by new models.

…and continues to underperform for some population groups

Māori and Pasifika have higher rates of participation in tertiary education than New Zealand Europeans overall, but this is exclusively because of their higher rates of participation in subdegree-level study. While there have been improvements in recent years, participation and outcomes for Māori and Pasifika students at higher levels of study are still concerning. The performance of the schooling system is a major driver of this. Yet even allowing for prior achievement at school, young Māori have lower rates of participation in degree-level study; and while Pasifika with University Entrance are as likely to enter degree-level study as their New Zealand European peers, they are much less likely to complete a degree.

Students are disempowered

Providers often impose high switching costs on students and have incentives to do so. Students may change their mind about a field of study or provider, or want to change the qualification level they are studying towards. Students may be unhappy with the quality or type of education they are receiving or may just realise they have made a mistake. But the system does not support students to change their path or to have their credit or prior learning recognised. The way government measures and rewards provider performance means providers have little incentive to help students change their course of study.

The tertiary education system is exposed to uncertain trends

The economy and society of New Zealand have changed significantly, and the tertiary education system has changed with them. People are making different study choices in response to increasing labour specialisation, the development of the service economy, and skills-biased technological change.

The demands on the tertiary education system will continue to change. The student population is likely to become more diverse, and many people predict that ongoing technological change will reshape the economy, and require people to upskill and retrain more often.

Views differ about how disruptive these trends will be. But even taking a view that trends will be incremental in nature, they present numerous challenges for the system. For example, many of the students for whom the system underperforms belong to demographic groups forecast to grow as a share of the population in coming decades. The system is not well-placed to cater for growth in learners seeking to upskill or retrain. These learners are likely to be looking for specific skills rather than full qualifications and are more likely to want to have their existing skills and learning recognised. Current funding rules mean that neither of these options are presently well-developed.

Technology will continue to evolve, creating the need for new types of skills and the potential for diverse new models of tertiary education. The uncertainty around what the next development will be, and how it might affect education, makes system settings that allow flexibility and responsiveness particularly important:

> The effectiveness of a tertiary education system may be measured by its ability to meet and resolve rapidly, and constantly changing, economic and demographic drivers. This requires a system that is agile and responsive, and high professional standards and ethical dispositions from those operating within it. (WelTec & Whitireia, sub. 59, p. 2)

Change is inevitable, but predicting how future trends will influence tertiary education is hard. Under current settings, the system has little or no ability to adapt spontaneously to such change. It falls to government to accurately predict these trends so that it can adjust its purchasing correctly and ensure its rigid regulatory controls are appropriate for changing times. This places a heavy responsibility on government to correctly predict the future and make timely anticipatory changes to policy – in the Commission's view, a near impossible task.

A better approach would be to allow providers to pursue different strategies, differentiate themselves, and adopt a wider range of new models. This would make the system more flexible, responsive, and resilient in the face of external shocks.

Providers respond to government, not students

Co-production works best when (among other things) providers and consumers have shared objectives, and shared expectations of what is required of each of them in the co-production process. In a student-centred system, providers would be responsive to the needs and aspirations of students – who in turn would have the skills and information they needed to make good decisions about their investments in tertiary education.

In the current tertiary education system, government allocates subsidies to providers who then allocate places to students. This system requires students to understand and meet the needs of providers (rather than the other way around), and means that providers are responsive to government (rather than to students).

Information to support new models

Better prepare students

Students' decisions about what, when, and where to study are an important driver of the tertiary education system. It is therefore critical that students are supported to make good decisions.

Concerns about how students transition into tertiary education are widespread, as are concerns about how well the compulsory education system prepares students for further learning and to take decisions about future study. Inadequately prepared, prospective students are presented with a confusing array of official and unofficial information sources about what they should and could study.

The arrangement and delivery of career services in schools, and government provision of information to prospective tertiary students, is fragmented and does not prepare young people to make career and study decisions. Government should review the arrangements for career education in schools, to create a system that focuses on building career skills in young people rather than giving them information. It should also rationalise official sources of career and study information.

Government agencies produce a range of information with the aim of informing decision-making of government, providers, and prospective students. But information is difficult to navigate and more attention needs to be paid to its accessibility. Information often reports raw measures of student achievement which do not take account of the level of learning that students begin with. This can create perverse incentives for providers to cherry-pick students, and mean the system as a whole can underserve already disadvantaged learners. It also means that published performance data can give a misleading view of providers' relative performance. Government should do more to take account of students' prior achievement, both in monitoring TEO performance, and in publishing information about what types of provision or provider serve different students best.

Promote student access and mobility

Students should be able to mix and match courses from different providers more easily. Students should have clearer information from providers about how their learning will be recognised when they transfer between qualifications or providers and the Tertiary Education Commission (TEC) should change the way it measures provider performance to reduce existing disincentives to credit transfer. NZQA should set stronger guidelines about providers' credit transfer policies. Because providers have all the power in credit transfer decisions, students should have recourse to a dispute resolution body if necessary.

The University Entrance standard is an unhelpful signal. University Entrance does not reliably signify preparedness for higher-level study. It also implies that a young person who achieves University Entrance is best off attending a university, when this may not be the case. Some universities set higher standards, while others would like to enrol students that do not have University Entrance. University Entrance should be abolished.

Recommendations to get the regulatory balance right

Quality assurance needs to ensure acceptable levels of quality, without choking innovations that might help providers serve groups of students better. Providers who fail to meet acceptable standards should face real consequences, and equally, consistently high performing providers should be given greater freedom. This raises the stakes associated with quality assurance and places a premium on processes that are robust, credible and based on accurate information.

Competent institutions should self-accredit

The collective accreditation of programmes of study, through processes like the Committee on University Academic Programmes, stifles innovation. It tends to define quality in terms of existing practices. It also gives providers veto power over each other's offerings, and affords providers early notice of other providers' intentions, reducing the potential returns to innovation.

Providers with a strong track record of educational performance should be given self-accrediting status. Self-accrediting status should be open to providers (from any subsector) that demonstrate the capability to effectively manage their own quality assurance processes. Universities should be grandparented self-accrediting status and the statutory provisions relating to the Vice-Chancellors Committee in the Education Act 1989 should be repealed.

NZQA should also streamline programme approval processes and other ex ante controls for providers that do not have self-accrediting status.

Remove some restrictions on how funding is used

Funding mechanisms include tight specifications regarding how funding is allocated, and what can be delivered. Some of these specifications, particularly requirements that students be enrolled in a full qualification, restrictions on the delivery of short qualifications, and restrictions on higher level industry training, should be removed or relaxed.

TEC expects institutes of technology and polytechnics (ITPs) to concentrate primarily on delivering education that meets the needs of students in their region, and requires ITPs to gain prior approval before they deliver outside their region. This gives incumbent ITPs protection, dampens pressure to improve or increase efficiency, and restricts the spread of new models. Educational delivery by ITPs anywhere in New Zealand should not require the approval of TEC.

Address the imbalance between research and teaching

Incentives for providers to invest in teaching quality are weak and, in universities, research performance is much more important for academic career success than teaching performance. Introducing processes to assess and reward teaching performance and removing statutory requirements that degrees are taught mainly by people engaged in research would help to address this imbalance and support the emergence of new models.

Increase tertiary education institutions' autonomy and responsibility

One reason government maintains tight control over tertiary education institutions (TEIs) – ITPs, wānanga and universities – is because government bears legal liability for their debts in the event of failure. So government has a reason to closely monitor the financial performance of TEIs, and keeps close control over how TEIs use and dispose of assets. This inhibits the kind of innovation that might significantly change a TEI's business model.

A TEI is required to produce a small surplus, but it also has an incentive to spend what it earns. If its surplus is too big, the TEI will find it hard to seek higher funding levels from government. So it can have an incentive to accumulate assets like buildings, which can lock in particular models of delivering education and prevent capital being invested in new models.

Financially competent TEIs should own and control their assets and be liable for their debts. The exemption from paying local government rates should be removed. These recommendations enhance the ability of TEIs to direct capital investments towards new models of education.

Allow new entrants

Disruptive innovations that combine technology with new ways of delivering value are more likely to come from new entrants than established organisations. New entrants often begin by radically expanding the market for a product or service, and are frequently subject to criticism as offering an inferior product. But the beneficiaries are people who were previously not accessing the product or service at all. The Ministry of Education should systematically identify and remove regulatory barriers to new entrants of acceptable quality, including from offshore.

Purchasing to reward new models

Improving regulatory settings will increase the flexibility of providers to innovate. But providers' incentive to do so is significantly constrained by the central allocation of EFTS quotas to tertiary providers. Providers – especially public providers – can comfortably rely on being allocated a quota year-on-year, and resources do not flow to providers who are innovative or are better at meeting student or employer demand. There is little movement in funding from year to year. There are few rewards for providers that do better, or incentives to try new things.

The Commission's draft report described an alternative approach to allocating resources directly to students via a Student Education Account. The Commission has not recommended this in the final report, because the preconditions for the model to operate successfully are not present in New Zealand. Instead, the Commission has noted requests from government agencies for more detailed advice about how such incentives could be created within the broad parameters of the current system.

Enable students to access courses that do not attract TEC funding

Because student loans are only available where TEC subsidises a course, and market failures prevent many students (those early in their career and without assets to borrow against) accessing private finance on affordable terms, the effective range of study choices available to students is limited to those subsidised by TEC.

Government should trial extending the Student Loan Scheme to courses that are approved by NZQA but not subsidised by TEC. These courses would not be subject to fee or volume caps, but borrowers would pay interest on their loans. This would provide an opportunity for existing providers to offer courses where there is high student willingness to pay (such as professional Master's), fund recognition of prior learning, or leverage economies of scale available from online provision. It would also facilitate new providers that TEC does not fund.

Reform fee regulation

Fee regulation protects student interests but also constrains innovation. It limits the ability of providers to create new products with different price/quality trade-offs and to signal these differences to students.

The current approach to fee regulation sets a cap on course fee increases. This approach is problematic on a number of grounds, including that it creates a disincentive for providers to experiment with lower prices, as any provider charging a lower price gets locked into a lower-price path in subsequent years. Maximum annual fee increases should be replaced with a policy that specifies a regulated maximum price for courses depending on their New Zealand Qualifications Framework level and field of study.

To encourage innovation while protecting access for low-socioeconomic status (SES) students, TEIs should be permitted to set higher fees (within limits) for some of the courses they offer, on the condition that the revenue raised is used to reduce fees, particularly for low-SES students.

Allocate funding in a way that follows student demand

Government should change its SAC 3+ funding approach, so that funded volume moves mechanistically between providers based on under- or over-delivery. Government should – cautiously – change prices, rather than volumes, to achieve other objectives such as encouraging participation by particular groups, in particular fields of study, or in particular locations.

The Performance-Linked Funding scheme was designed to encourage providers to reach an "acceptable standard of educational performance". But Performance-Linked Funding provides weak incentives for good performance and an insufficient sanction for below-threshold performance.

Government should discontinue Performance-Linked Funding and instead design and implement a new pricing mechanism to incentivise providers to continually improve their performance in adding value to students. The mechanism should:

- use metrics that are adjusted for characteristics of the student intake;
- redistribute money (rather than funded student volume) from lower- to higher-performing providers at all levels of performance;
- avoid penalising providers when students leave study for reasons unrelated to provider performance; and
- affect a consequential amount of funding.

Because the results of innovation are uncertain, any funding approach that penalises providers for lower performance can discourage providers from adopting new models. Providers should be permitted to use a fixed proportion of their SAC funding each year on "experimental courses", with special conditions relating to monitoring and evaluation.

Enable new entrants to access funding

It is very difficult for new providers to access TEC funding. The Commission has heard that "the best way to become a TEC-funded PTE is to buy a TEC-funded PTE". To encourage new models, it is important that new providers can get a foothold in the market, as they generally have more to gain, and less to lose, than incumbent providers in terms of experimenting with new models. Government should have a mechanism to ensure that a small number of EFTS are available each year to allocate to new providers.

Break open the EFTS

The EFTS model of subsidising tertiary education is a significant challenge to innovative models, particularly online models, because it entails measures of "learning hours" that can only be assured when everyone progresses through learning at the same pace. The EFTS is a barrier to education models that accelerate the delivery of learning, or that separate teaching, assessment and credentialing. TEC should remove any reference to inputs in its definition of an EFTS. It should instead rely on the relevant quality assurer's careful assessment of "credit value" to determine the funded size of courses and qualifications.

System architecture to support new models

This inquiry presents an opportunity for government to design agency forms that provide clarity of function and reduce conflicts of role. In particular, responsibility for monitoring and managing the Crown's ownership interest in TEIs should transfer from TEC and the Ministry of Education to Treasury.

In theory, government's goals for the tertiary education system are expressed in the Tertiary Education Strategy (TES). But in reality the TES is a high-level wish list rather than a plan for achieving change. Government should develop a new TES that articulates a clear plan for how government will enable a wide range of New Zealanders to participate and succeed in tertiary education in a way that maximises the returns, broadly conceived, to government's expenditure on tertiary education.

The new TES should be supported by an indicator framework that shows how government will measure progress in achieving the goals of the TES. This framework should populate the accountability documents of education agencies, in line with their respective roles and responsibilities.

What it all means

Together, the recommendations in this report will create valuable dynamism and experimentation that is currently lacking in New Zealand's tertiary education system, without making unmanageable demands of quality assurance or funding infrastructure. They will also enable a wider variety of New Zealanders to participate and succeed in tertiary education. The report provides the recipe for a system that is diverse, adaptable and responsive – in other words, a system that supports new models.

The full report *New models of tertiary education* is available at www.productivity.govt.nz

The New Zealand Productivity Commission – Te Kōmihana Whai Hua o Aotearoa – is an independent Crown entity. It conducts in-depth inquiries on topics selected by the Government, carries out productivity-related research, and promotes understanding of productivity issues.