

Submission on the inquiry into New Models of Tertiary Education

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Please note this submission is made on a personal basis and as President of ACODE and in no way represents the views of Victoria University of Wellington.

This submission refers to a number of published and in-preparation manuscripts and reports. Space and time constraints have limited this submission's content but I am happy to provide further information as needed to assist with the Commission's work.

Q1

What are the advantages and disadvantages of administering multiple types of post-compulsory education as a single system?

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The advantages of treating tertiary education as a single system relate to the belief that priorities and resources can be more efficiently deployed to the benefit of society as a whole. The problem with that model is the inevitable way that political priorities are shaped are influence the sector, and the pragmatic reality that qualifications are the overriding factor dominating perception of success of the system.

The major feature shaping the system currently is the focus on transitioning school leavers into employment. While this is important, it is not the only reason for investing in a national system of education. The TES also notes other priorities such as Maori and Pasifika success but is virtually silent on how the system supports the ongoing development of individual capability through life. Demographic shifts and technological developments mean that a significant portion of the population will need support either in remaining in employment or in maintaining a sense of engagement and social connection that supports healthy communities of people not in paid work.

Management of the system currently is also affected by the dominance of the degree. The spread of degree offerings beyond Universities is a natural response to the pressure for people wanting cheaper access to a qualification that is seen as providing better access to jobs and which is internationally recognised for both migration and employment. The negative impact of this growth is discussed in more detail in the reponse to Q46 and Q47 below.

Finally, a major issue with the single system model in practice is that it treats students as interchangeable members of an homogenous cohort. Success is experienced at the level of the student not the cohort and is distorted by the use of simplistic outcome measures. An example of this is the current TEC completion numbers which are completely devoid of any context for individual students and which fail to recognise and value an educational experience that sits outside of the default period and single provider norm.

Pragmatically, there is no reason to believe that the same quality and performance management systems will work for providers ranging in size from the smallest PTE to the University of Auckland, and with models of provision that vary from workplaces to classrooms and fully online. A far more justifiable model would start by using the individual student as the point of focus and success would be determined on the impact that education has on their quality of life rather than on achievement of specific qualifications at a particular provider. Although this is clearly challenging and complex, the increasing availability of large scale data analysis tools and virtually ubiquitous access to mobile devices and the Internet mean that the tools to engage with this challenge exist.

Q2

Do prospective students have good enough information to enable them to make informed choices about providers and courses? What additional information should be provided? Who should provide it?

Page 8

No, the harsh reality is that the vast majority of students will always act at a disadvantage when selecting educational activities. Education is an experience good, which is to say that its value can only be determined during and after the experience of it. Another problem is that the impact of an educational experience is in part determined by the student themselves. Finally, longer formal qualifications such as degrees are offered over a timeframe that increasingly seems out of step with the pace of change in society generally. A three year period can see dramatic changes in the economic, technological and social environment that mean any form of prediction is flawed at best. Student choices also do not happen in a vacuum, and any factors influencing interest in particular qualifications and providers will likely see other students similarly affected – thus

generating boom/bust cycles with consequent impact on the value of the resulting qualifications (see also Q46/Q47).

Rather than focusing on historical or theoretical employment outcomes, students need information on the way that educational experiences will build capabilities that provide them with frequent and substantive connections directly into meaningful contexts during education and with options to choose from a variety of employment and social opportunities once qualified.

Q3

Is the business model of universities published by Universities New Zealand a good characterisation? Are there aspects of the business model of universities that it does not explain?

Page 11

The model is true as far as it goes, however it needs to acknowledge that the top levels of the international rankings are very stable and unlikely to change. It is also very unclear that the rankings have any real value domestically, the available evidence suggests that they primarily influence international student choice, although this is also subject to financial concerns, perception of the social environment, and also possibly a network effect (apparent in the disproportionate success of Melbourne as a destination for international students).

The business model also nicely avoids any discussion of the extent to which teaching revenues cross-subsidise research, and also the extent to which some disciplines generate different revenues for teaching and have different cost structures. It also fails to acknowledge the long term investment in public institutional infrastructure by the community and the impact this has on different providers.

Q7

What are the implications of economies of scale in teaching (and the government funding of student numbers) for the delivery of tertiary education in different types of providers and for different types of courses and subjects?

Page 12

The problem with cost models of this type is that if the qualities desired from students are not clearly calibrated in the system it is impossible to be confident that growth in scale is not damaging outcomes. The real costs are highly influenced by the choice of subject, preparation of the student and model of teaching. The cited research doesn't make any serious attempt to engage with the complexity of costing teaching and implies that scale can occur simply by increasing lecture size. Consideration of assessment models is absent as is any consideration of the changing expectations of graduates reflected in the growth in collaborative learning models. The reality is that, absent any detailed tracking of individual student progress and extensive auditing of a wide range of provider investments, robust cost/benefit analyses are very hard to achieve.

Q9

What are the implications of fixed capital costs for the business of tertiary education? Do differences in the capital structure of different tertiary institutions have important implications for the delivery of tertiary education?

Page 13

Capital infrastructure remains a significant issue for most providers. All available evidence suggests that face to face experiences are an important contributor to student success in education, strongly influencing engagement, motivation and the maintenance of an culture of intellectual activity, while also providing an efficient means to access specialist facilities. Good space design, incorporating modern technologies to support access to information and

collaboration, clearly generates a more effective learning environment and enables new models of provision such as the remote linking of classrooms used by Victoria in a growing number of courses and programmes. This does provide the opportunity to use leased facilities for general teaching, and there seems some likelihood that some form of long term lease/partnership arrangement could also be effective for major urban providers seeking construction of new buildings.

A major challenge is the conflict between time scales. Students need education now, technology is being refreshed every year or two, but buildings require decades to construct and use. One response being used at Victoria is to increasingly build flexible spaces that can support traditional modes of provision, but also can easily react to changing modes and new technologies.

Q10

What are the implications of the multiple activities of tertiary education for its delivery? What outputs are best produced together? What outputs are best produced separately?

Page 13

The issues paper provided by the Commission states on page 13 prior to this question: “At nearly all providers, teaching is “bundled” with other educational services like assessment and credentialing. Teaching is often also bundled with ancillary services such as libraries, and student pastoral care and accommodation (Staton, 2012) – and, as discussed below, with research, especially at universities.”

This statement completely calls into question the understanding of the process of learning and teaching. Assessment is not “bundled” it is part of a set of pedagogical tools that are integral to education. Effective assessment and feedback are essential to learning providing information that enables student action and supporting teachers in understanding and responding to student progress. It is nonsensical to talk about it as a bundled activity.

Assessed outcomes aligned to the awarding of credentials is also currently the only way in which evidence of capability is accepted. It is possible to consider portfolios of student work as a future model for communicating rich information but currently these are dominated by assessment work, rather than the outcomes of other learning activities.

Systems aimed at alternatives, such as RPL (Recognition of Prior Learning) are fraught with significant challenges including the costs of a through assessment, inter-rater reliability issues, and problems with incomplete or mismatched student capabilities with expectations made of programmes and qualifications.

Q11

What are the benefits and disadvantages, in terms of students’ learning outcomes, of bundling together research and teaching at universities in New Zealand?

Page 14

Internationally, teaching only universities struggle to attract top academics and this model is associated with a significant decline in the employment conditions of the staff – including casualisation and precarious employment. Students must inevitably be affected by this degradation in quality, particularly as many existing staff would leave for countries like Australia if they lost the ability to be researching as well as teaching academics.

New Zealand already essentially has this model with the degree provision by non-University providers, none of which have the same reputation as even the smallest University

The defining feature and engine of universities is post-graduate education. The undergraduate population sustains this and provides a context for students to learn about and gradually enter the post-graduate community. It is implausible to talk of offering PG education without a strong

research culture that will only exist if academics conduct research as well as teach. Arguments about the contribution that such research makes directly to undergraduate outcomes are essentially irrelevant to this point (and it should be noted depend on a highly suspect evidence base of student outcomes). It should also be noted that the rapid pace of change in many disciplines and the complexity of the changes mean that teachers need to be actively engaged with research in order to be able to predict future trends and prepare students for the future context.

Internationally a university would struggle to attract foreign full fee paying students if it was poorly ranked for research, and would also be unable to charge anything like the already very cheap fees we currently do.

Q12

What value is attached to excellence in teaching compared to excellence in research when universities recruit or promote staff?

Page 14

Research dominates appointments at all levels, minimal consideration of teaching capability occurs at best. Many appointments happen remotely without serious exploration of interpersonal and communication skills or pedagogical knowledge. Poor teaching will affect promotion negatively, but it is very challenging to remediate issues in the absence of any requirement for teaching qualifications and with the currently limited measures of quality used.

Q13

Do New Zealand TEIs cross-subsidise research with teaching income?

Page 14

Probably, however it is very hard to quantify the extent to which this occurs. The problem is a lack of evidence on the real costs of education. Many internal services and infrastructure costs are not analysed to the level of detail necessary. Likely to dramatically vary by discipline and thus by university – i.e. medical education vs business generate radically different cost structures.

Q14

What other evidence is there about what makes for effective teaching in a tertiary environment? Is it different for different types of learning or student? How can teaching effectiveness be best measured and improved?

Page 17

The challenge in identifying effective teaching is perhaps exemplified in the material presented. Ideas of deep and surface learning for example are superficially attractive but are now considered unpersuasive with the sense now being that people move between deep and surface learning approaches in a strategic and reactive way reflecting their personal goals and priorities. These are influenced by a wide variety of factors including the learning design, the expectations being made of students in assessment, the nature and type of feedback being provided and the way that feedback is integrated into learning designs and assessment programmes.

Expectations of effective teaching are also shifting as greater attention is paid to wider graduate attributes developed throughout a programme of study rather than just in a single course. These papers provide an overview of the state of engagement with Graduate attributes in New Zealand and suggest a framework for effectively engaging with GAs in ways that can shift institutional expectations for good quality teaching across programmes and qualifications:

R. Spronken-Smith, C. Bond, A. McLean, S. Frielick, N. Smith, M. Jenkins &

S. Marshall (2015) Evaluating engagement with graduate outcomes across higher education institutions in Aotearoa/New Zealand, Higher Education Research & Development, 34:5, 1014-1030, DOI: 10.1080/07294360.2015.1011098

C. H. Bond, R. Spronken-Smith, A. McLean, N. Smith, S. Frielick, M. Jenkins & S. Marshall (2016): A framework for enabling graduate outcomes in undergraduate programmes, Higher Education Research & Development, DOI: 10.1080/07294360.2016.1170767

Teaching staff need to be encouraged to update their skills as teachers, particularly in those parts of the sector where teaching qualifications are not common. This is an opportunity for teachers to start to experience e-learning directly themselves, to start to demonstrate their own skills and knowledge in ways that are not framed just by qualifications but rather placed in a richer context that respects their individuality as well. Wider use of approaches like portfolios and formal accreditation as part of university academic promotion processes would be a good start. The challenge universities in particular face is that many of the tools used to manage and improve quality in other industries are irrelevant or unhelpful in shifting the quality culture in higher education. Approaches that use a sensemaking attitude to quality stimulated by engagement with graduate attributes and/or technology are aligned more strongly to the culture of universities than attempts to impose standards or performance measures generated externally.

Q15

How do tertiary providers assess, recognise and reward teaching quality in recruitment and career progression? To what extent do tertiary providers support the professional learning of teachers? **Page 19**

Teaching quality is assessed primarily in New Zealand universities by the feedback that students provide, this is typically provided as a summary table. Richer and more detailed summaries such as portfolios are relatively rare. Promotion applications require information on teaching but this is of decreasing importance as academics become more senior.

Universities provide academic professional development but the level varies significantly across the different universities and it is fair to say that in most it is struggling to be regarded as a priority. University academics do not have to complete any formal qualification and typically meet minimum requirements for development through attendance at a few days of training. Many do not engage in any other systematic training, development or qualifications in teaching. Particularly in the years leading up to the PBRF census, academics are actively discouraged from engaging in formal programmes.

Q17

In what ways and to what extent do employers interact with tertiary providers in New Zealand? Are there practical ways to encourage employers to have greater or more productive involvement in the tertiary education system? **Page 21**

New Zealand Needs far greater integration of education with other contexts including, but not limited to, employment. The current model typically extracts people from a context that gives their education meaning (social, community, employment), places them in an often alien and challenging environment, and then attempts to create a poor facsimile within the educational system to mitigate the most obvious effects of disengagement and alienation that naturally occur for many students.

Technology increasingly is providing opportunities to provide many elements of education to learners directly in their context. This is not to say that there isn't value in bringing students

together, just that the emphasis is too much on the latter and not enough on the former. Many of the problems that motivate current models of quality in higher education have as their cause the disconnection of learners from the social and economic life of their community. Delivering education primarily while people are in employment or based in their community means that they retain the ongoing support of existing social networks and also are more likely to see direct value from their education in their lives. This would be far more motivating and engaging for many students than the current model which depends on the student realising an abstract benefit, often without a personally meaningful context.

A cost of this model is the need for society and employers to value time spent in education while people might otherwise be expected to be doing other tasks including paid work. A variety of approaches are being used in a genuine attempt to provide students with a simulation of an authentic workplace, including internships, placements, case studies and so forth, when the real solution is to have learning situated in the workplace or community from the start. A major factor contributing to the financial unsustainability of tertiary education is the way that the costs have been transferred from the employer to society and to individuals, creating an invisible subsidy that distorts the real market for talent. It would be useful to start exploring ways that employers in particular could be encouraged to support directly greater engagement with formal education in the workplace, perhaps through tax credits aligned to staff release time for such initiatives, or some form of public/private partnership investment in pilot programmes targeting specific industries or large employers.

Q23

How effective is the TES instrument at giving government education agencies direction about prioritising resources and making trade-offs in carrying out their roles? What are the benefits and risks, in terms of fostering an innovative system, of a more or less directive TES?

Page 24

The challenge with the TES is that it defines what the sector and agencies are accountable for and this leads to the construction of a bureaucracy aimed and circumscribed by the specific priorities. While a more directive TES would be unhelpful, a more aspirational and value-driven approach would help encourage an awareness of the need for the sector to be more agile and dynamic. If risk taking and change driven by new ideas and approaches are valued, they need to be specifically noted as priorities and supported by funding models aligned to a TES that values these as outcomes. This needs to be framed by the nature and type of outcome desired, not by measures and priorities that specify specific modes and processes.

Q28

In what ways does a focus on educating international students complement or undermine the other goals of tertiary education providers?

Page 31

Q44

How has internationalisation affected New Zealand's tertiary education system? What are the ongoing challenges and opportunities from internationalisation of the tertiary education system?

Page 71

The New Zealand Tertiary Education Strategy 2014-2019 clearly conveys the economic importance of international education:

“International education provides an important opportunity to improve the value delivered by tertiary education. International education not only provides additional sources of income for New Zealand TEOs, but also stimulates international linkages with overseas counterparts.” (New Zealand Government, 2014, p. 18)

These statements describe the clear priority placed on international education. Education is described as an export industry, and placed within the Government’s overall priority focus on growing trade. This is emphasised by the major measureable outcome, to “double the total value of international education to \$5 billion by 2025” (p. 19) which is not drawn from any educational perspective or strategy, but rather taken from the Export Markets work stream of the government’s business growth agenda (New Zealand Government, 2014).

The alignment of education with economic outcomes in New Zealand is perhaps most strongly signalled by the portfolios of Minister Steven Joyce, which include Minister for Tertiary Education, Skills and Employment, as well as Economic Development. Minister Joyce has stated publicly (2012) that international students are an “income stream” and represent “the single biggest opportunity that universities in New Zealand can avail themselves of right now to significantly grow their incomes.”

A further indication of the Government’s priorities in education policy is apparent in the terms of reference given by the Minister of Finance and Minister Joyce to a national Productivity Commission review into the New Zealand tertiary system. This includes as a term that the Commission: “Explore the implications new models of tertiary education could have for New Zealand’s position in the international market for tertiary educators, students, education products and services” (English and Joyce, 2015).

As regularly noted by Minister Joyce (Joyce, 2012; Elder, 2014), New Zealand universities appear to be attracting significantly less international student revenue when compared to similar Australian institutions. The Minister has been quoted as stating that the New Zealand Universities are “behind the eight ball” on international education and he has initiated a major restructuring of University Council composition in part to force a greater engagement with international students (Elder, 2014).

OECD figures suggest that New Zealand is however already very successful in attracting international students, ranking well above the OECD average with 16% of students in tertiary study drawn internationally, compared to 18% in Australia, and well above the US at 3.5% (OECD, 2014). This however should be seen in the context of the much higher proportion of the population in tertiary study in both countries compared to other major destination countries such as the US and the United Kingdom that attract far larger numbers of students.

The relatively high proportion of international students studying in New Zealand tertiary institutions does raise the question as to why the revenues reported are so low. Clearly the relative level of fees being charged is also a significant factor. However, part of the explanation for the lower revenues attracted by New Zealand universities can be found in the type of tertiary qualification being sought, with students undertaking proportionately more shorter vocational qualifications at New Zealand (31% of the total; OECD, 2014, Table C4.1) compared to Australia (11% of their international students).

Success breeds its own issues. The high numbers of Chinese students are a particular issue with some institutions risking over-saturation, leading some to observe that “If you want to improve your Chinese, go to America, because you’ll have many, many classmates from Beijing” (Fischer, 2013). The tension between the desire for revenue and the need to cope with a different world view and values is readily apparent in the reporting by US Media of changing experiences with international students in that country (Abelmann & Kang, 2014). Chinese nationals educated internationally are apparently becoming less welcome in their own country as well, being referred to as “haidai,” Chinese for seaweed, reflecting their disconnection from society (Fischer, 2013). These students are also referred in some Chinese domestic media as

“laji liuxue”, or “trashy study-abroad” (Liu as cited in Abelman & Kang, 2014) reflecting the sense that these students lack the qualities needed to succeed in the competitive Chinese system. The dominance of specific student populations is not just a question of language and culture; it has academic consequences as well. International student enrolments are typically disproportionately focused on business, science, technology, and engineering delivered in major metropolitan universities (Ruiz, 2014).

There are also problems caused by the predominance of students choosing to study in Auckland. Universities based in the Auckland region attract 48% of the international students coming to New Zealand (Education New Zealand, 2015) contributing to an unsustainable distortion in economic and demographic growth (Nel, 2014). The lack of student sensitivity to cost is evident in the observation Auckland is the most unaffordable city in New Zealand to live in, particularly for non-European ethnicities that dominate the international student population (Law and Meehan, 2013).

The obvious response to this situation is to shift the proportion of students towards the more substantial qualifications operated by the universities. There is some evidence of such a shift already occurring, with most growth in international student numbers occurring in the postgraduate research degree segment (Education New Zealand, 2015). However this is not necessarily generating increased profit for two main reasons. Firstly, New Zealand has chosen to allow international research students to pay the same fees as domestic students, unlike undergraduate degrees where a much higher fee is charged. The second is that postgraduate study imposes much greater pressure on institutions as postgraduate programmes require a much higher level of staff involvement with students and are consequently less amenable to efficiency gains in scale.

Clearly the New Zealand government sees international revenue as an important component in the funding of universities but there is no evidence they have considered how to respond to the risks that arise from using this revenue to sustain the system. There are several examples of this market declining rapidly in the face of unpredictable events such as the NZ experience with China and the Australian with Indian students. New Zealand universities losing 20% of their revenue from such events will struggle to cope with the budgetary consequences, potentially disrupting the education of domestic students. It is hard to see how some of the Australian universities drawing more than 40% of their student revenue from international students could cope with a significant disruption. In neither country is the Government prepared to address any consequent shortfall in funding, and so the most likely outcome is the loss of large numbers of staff and potential failures of the institutions.

Export economies inevitably move through cycles as the global economy grows inconsistently and responds to a complex interplay of political, social and environmental challenges. Exporting businesses recognise the need to respond to this dynamic environment using a variety of tools ranging from currency management to the structure of employment. It is clear that the universities themselves are not currently structured to respond to rapid change (Marshall, 2010). In part this arises from the nature of universities as social institutions operating simultaneously at a local, national and global level (Marginson, Kaur and Sawir, 2011).

There are strategies that can mitigate the risks and increase the benefit to New Zealand from international students. The most obvious is to recognise that the fees charged for international students by New Zealand universities are almost certainly too low. The New Zealand dollar is expected to weaken in the near future so there is an opportunity to substantially lift the fees to a level more consistent with similarly ranked institutions. Increases of 20% in real terms would bring the universities significantly greater revenue and could well see numbers of students increase as the perception of quality would grow while the costs of living decline also acting to promote growth in numbers. This has the potential to shift the focus from education as a tradable commodity to more emphasis on the value of the resulting education to the student and on the quality of education generating the reputation capable of sustaining the high level of fees.

A second strategy would be to act as Germany has (Labi, 2012), using student migration to respond to wider demographic challenges facing the country. A significant growth in international student numbers coming to New Zealand would exacerbate the longer-term trend that sees parts of the country depopulating and struggling to sustain domestic economic activity while Auckland dominates with an unsustainable level of relative growth (Nel, 2014). Currently this is driving other universities to open premises in Auckland in order to gain access to international and domestic students. The dominance of Auckland (as well as Melbourne in Australia) likely reflects the network effect identified by Beine, Noël, R. and Ragot (2014) where a pre-existing population of students from their country preferentially attracts students.

A strategy that could encourage more students to attend universities outside of Auckland would be to adjust the policy on student fees for postgraduate degrees. If students enrolled in postgraduate programmes were able to pay domestic fees only outside of the Auckland region then there would be an incentive for them to consider study at one of the other New Zealand universities. This would see growth spread more sustainably around the country and potentially reverse some of the regional decline. Allowing an initial period of undergraduate study in Auckland would provide a transition experience respecting the student's likely desire to start their international education in a setting they perceive as accommodating.

A third strategy is to ensure that the risk of rapid changes in student revenue is managed effectively. Some form of cap on the proportion of student revenue derived from international students seems wise. This could be defined on a per-country basis reflecting the global numbers of such students. This would also act as an incentive to develop new relationships and markets for international students, reducing the dependency on China and potentially building stronger relationships with growing Pacific, South American and African nations to the longer term benefit of the wider economy in New Zealand and in those countries.

International education also needs to be more actively used a tool to help universities engage with the economic drivers of the modern global market. Asian nations operate a significant and growing portion of the commercial, technological, industrial and manufacturing infrastructure driving the global economy. International students represent an entry point to these countries through on-going relationships sustained through research and professional development. Positioning transnational engagement as a means of sustaining these activities provides a rationale for a model that avoid a focus on building campuses and instead focuses on capability and outcomes. In this respect New Zealand has a significant advantage over Australia, the UK and the US given its history of a relatively independent foreign policy, good diplomatic relationships and small size which ensures that it not seen as a potential military or economic threat to Asian interests.

The final and possibly hardest strategy is to reflect on the nature of globalisation and internationalisation as it affects universities (Knight, 2015) and to consider how the New Zealand universities can act as a unified network, much as they used to under the original University of New Zealand, and consistent with their funding as public universities. The reality is that New Zealand has a population less than any of the large cities that might provide students for international and transnational education. Individually New Zealand universities will constantly struggle to match the influence, reputation and resources of even one top international university like Harvard or MIT. The network affect that has seen Melbourne attract a disproportionate share of international student revenue however could apply to a national context in a small country like New Zealand.

Treating education as an export commodity is a natural, even well accepted, approach for countries to attract additional revenue into their higher education systems. New Zealand's political leaders appear to be advocating a completely reasonable set of priorities with the sector. Unfortunately, in so doing, they are minimising the complex relationship universities have with society. A substantial increase in student numbers may not deliver the financial outcomes politicians desire if so doing further reduces the reputation of the institutions, drives down the fees they charge, discourages domestic students (or worse still encourages the best students to

leave the country), or further disrupts the ability of the universities to serve other national interests. Ideally any such drive would be incorporated within a wider policy and national strategy framework that was able to articulate national goals and purposes for higher education beyond merely profit.

International education is clearly driven by the positional nature of educational qualifications. Reputation drives the ability of institutions to charge higher fees and become more profitable. Success drives further success through network effects that also increase the desirability of some institutions but also generate congestion. The issue is that the real benefits of education are dependent on its success as a contributor to material outcomes, either through direct contributions to economic growth, or more indirectly through improvements to the social fabric. Relentless pursuit of the international student is consequently a catch 22 that increases success while destroying its value.

It is worth considering what exactly is the commodity being traded. Arguably, if distastefully, the commodity is the students themselves. In which case, the control policy and the market lies with the source country and their political and economic policies and relationships more than it is with the alternate conception, that the educational experience is the commodity being traded. If the latter is the case, then the experience of the MOOC suggests that it is potentially a very low value commodity.

Q29

What factors best explain the discrepancy between growing levels of tertiary education attainment without a significant productivity dividend?

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Problem is simultaneous changes in the distribution of wealth, substitution of labour with capital means that fewer educated people are needed to grow wealth and the resulting profit is captured by a small private group and not visible as public wealth.

Fundamentally, educated people in New Zealand are underpaid. As an example, a New Zealander using the available student financing schemes completes an undergraduate degree with a student loan of \$16,731 (Source: Ministry of Education, Education Counts website <http://www.educationcounts.govt.nz/statistics/>) which covers all of their fees and a small proportion of other costs, and has likely foregone at least \$82,524 in earnings during that time (Source: Statistics New Zealand NZ Income Survey <http://www.stats.govt.nz/>), for a total cost of \$99,255, with lost earnings reflecting 83% of the complete cost to the student. New Zealand students with Bachelor's degrees were employed to higher proportion than those with lower-level qualifications, and their median earnings had a premium of nearly 10% over the national median earnings in the first year, rising to 46% over the five years to 2012 (Mahoney et al., 2013; Park et al., 2013). Depending on their field of study this means that students will take nearly a decade to start generating a real return on their education.

The problem arises however if further qualifications are needed in order to remain in employment or continue progressing. This trend has been evident to those reflecting on the development of technological society for decades:

“In the near future, the rate of change will be so high that for humans to be qualified in a single discipline - defining what they are and what they do throughout their life - will be as out-dated as quill and parchment. Knowledge will be changing too fast for that. We will need to reskill ourselves constantly every decade just to keep a job.” (Burke, 1996, p. 5)

If people need education to sustain the multiple career shifts that are predicted, it is entirely possible that in practical terms they see very little financial return from that investment (although they likely enjoy a wide range of other positive outcomes). Beyond the direct financial cost, there

is also the opportunity cost of individual time and effort. An undergraduate degree typically reflects 3-4000 hours of work by a student over a three or four-year period. Highly motivated people are able to sustain periods of study while in full employment in order to obtain qualifications such as MBAs, but this comes at substantial costs to their employers and families, and it is certainly not the norm.

Q30

What are the best measures to determine whether the tertiary education system is working well?

Page 36

A key feature of a future focused quality system is its ability to engage at the level of an individual student, to provide guidance and support in real time to the participants of educational processes (students, teachers, employers and others) formatively allowing agility, choice and responsiveness, rather than reporting summatively after the moment to act has passed. This requires measures that are generated and analysed at the level of individual students, rather than homogenising them into generic cohorts using a few demographic descriptors. Ideally these measures would represent significant milestones in the improvement of people's quality of life enhanced by engagement with education.

An obvious measure is the progression by individuals towards the completion of formal qualifications, represented by the completion of courses or units undertaken from a variety of providers. There needs to be however recognition of the significant numbers of people outside of the formal system who lack basic literacy, numeracy and technology skills that can usefully be reported upon and progress recognised. Particularly for people with goals outside of formal qualifications and employment, actual engagement in learning activities that provide connections into different social and community contexts should also be valued. This is particularly important when considering the needs of the growing retired population, and when developing policies to deal with potentially under-employed adults.

Q31

What other evidence is there about the influence of tertiary education system performance on graduate income premia in New Zealand?

Page 38

New Zealand students with Bachelor's degrees were employed to higher proportion than those with lower-level qualifications, and their median earnings had a premium of nearly 10% over the national median earnings in the first year, rising to 46% over the five years to 2012 (Mahoney et al., 2013; Park et al., 2013). The OECD (2013, 14) notes that degree educated people enjoy a significant earnings premium over a lifetime with 25-34 year-old people with a degree earning 40% more than peers with a secondary education, rising to a 73% premium for 55-64 year-old people.

These analyses are however based on historical data, and it is increasingly unclear that a similarly large benefit still accrues given the changes in the scale and scope of education occurring internationally, the consequent issues with qualification inflation and positional value deterioration driving up the costs of education while failing to deliver more capable graduates, and the impact of technology on the numbers of skilled employees actually needed in the economy. Modelling by the New Zealand Ministry of Education, for example, suggests in that country salaries for qualified people are constrained by the lack of growth in demand generally in the economy (Earle, 2010a, p6) encouraging New Zealanders to seek qualifications and careers that can take them overseas and suggesting, purely on an economic basis, that Government support for higher education should in fact be reduced. The historically high levels of unemployment for younger people in most countries is of particular concern as there is a risk that

they will continue to struggle when competing against newer graduates and technologies when economies start to grow again. Consequently, there may be an entire generation who never recover the cost of their education.

Q39

What impact has the pattern of government spending on tertiary education had on the tertiary education provided? Page 61

PTE-A is a private training establishment (PTE) providing vocational training to approximately 1500 students engaged in full- and part-time study (Marshall, 2012). PTEs are commercial organisations operating either as for-profit or non-profit educational providers under a national quality assurance and accreditation framework. PTEs are funded through a mix of student fees and public funding. PTE-A's students are predominantly mature and are based throughout New Zealand, usually in either part-time or full-time employment in a single very tightly defined and regulated industry. PTE-A has been in operation for more than 25 years, initially as a face-to-face provider, but in the last decade offering distance options as well.

A unique feature of the pedagogical model used by PTE-A was the flexibility they offered students around commencement of the programme and the way that the PTE supported the development of a community of learners. Courses are structured in modules of several weeks. Students could commence the programme at any time during the year and immediately join the first module. A consequence of this was that any one time the cohort of students taking a particular module would be distributed evenly, some new to the module, others in the middle, and some close to completion.

Students close to completion were encouraged to act as mentors to students starting the module, sharing their experience and insight and helping the new students join the online forums. This model, while pedagogically excellent, also had the advantage of aligning well to the workplaces the students were intending to enter, as a similar work pattern is normal in that industry.

This excellent model, however, has failed through an unintended consequence of the New Zealand quality system managing funding. In order to ensure that student numbers are managed by institutions to maximise the completion and retention rates, the TEC has imposed student number limitations on providers through the operation of an annual funding plan with severe penalties for those providers who exceed the allocations.

The perception this created amongst students was that access would be limited to those who enrol early. Consequently, a large number of students applied to start immediately in the academic year such that the continuous flow of previous years was replaced by a single cohort all in lock step. The opportunity to sustain an pedagogical valuable model well aligned to the needs of employers was lost as a result of the funding model.

Q42

What specific technologies should the inquiry investigate? Why? Page 67

MOOCs are at best irrelevant, at worst they represent a substantial wastage of cost and loss of educational capital to international interests. While open in limited ways to students they do little to add real value while also having significant opportunity costs for institutions particularly those entering into the expensive international collaborations.

More generally, the 2016 Horizon Technology Outlook for Australia identified the following technologies as significant over the respective time periods:

Important Developments in Educational Technology

Time-to-Adoption Horizon: One Year or Less

- Bring Your Own Device (BYOD)
- Flipped Classroom
- Learning Analytics
- Online Learning

Time-to-Adoption Horizon: Two to Three Years

- Adaptive Learning Technologies
- Location Intelligence
- Makerspaces
- Wearable Technology

Time-to-Adoption Horizon: Four to Five Years

- Affective Computing
- Augmented Reality
- Machine Learning
- Networked Objects

These were generated by a large panel of New Zealand and Australian experts. A detailed report will be published in May/June and will be available here: <http://www.nmc.org/publication-type/technology-outlook/>

Q43

What parts of the tertiary education system are challenged by ongoing technological change? What parts can exploit the opportunities created?

Page 67

Ongoing technological change is a significant challenge for all New Zealand TEOs. The issues they all face are the pace with which technology changes and the consequent need to continually evaluate and invest in changing technologies while also ensuring that staff are capable and supported in using these tools.

Assessment of the e-learning capability of New Zealand Universities (Marshall, 2011) and Polytechnics (Neal and Marshall, 2008) conducted in the last decade showed clearly that none of the institutions had in place systems to test the quality of their engagement with e-learning and all lacked systems supporting continuous and systematic self reflection and improvement. There is no evidence to suggest this has materially changed in recent years.

Marshall, S. (2011). Change, technology and higher education: Are universities capable of organisational change? *Australasian Journal of Educational Technology* 26(8).
<http://ajet.org.au/index.php/AJET/article/download/1018/279>

Neal, T. and Marshall, S. (2008). Report on the Distance and Flexible Education Capability Assessment of the New Zealand ITP Sector. Report to the New Zealand Tertiary Education Committee and Institutes of Technology and Polytechnics Distance and Flexible Education Steering Group. 82pp.
https://www.academia.edu/12601968/Report_on_the_distance_and_flexible_education_capability_assessment_of_the_New_Zealand_ITP_sector

Q46

What other trends provide challenges and opportunities for the tertiary education system?

Page 71

Q47

What trends are likely to be most influential for the tertiary education system over the next 20 years?

Page 71

the 2016 Horizon Technology Outlook for Australia identified the following trends and challenges as significant:

Key Trends Accelerating Educational Technology Adoption

Long-Term Impact Trends: Driving technology adoption in Australian tertiary education for five or more years

- Increasing Value of the User Experience
- Rethinking How Institutions Work
- Rise of More Authentic Assessment

Mid-Term Impact Trends: Driving technology adoption in Australian tertiary education over the next three to five years

- Growing Focus on Measuring Learning
- Redesigning Learning Spaces
- Shift to Deep Learning Approaches

Short-Term Impact Trends: Driving technology adoption in Australian tertiary education over the next one to two years

- Growing Interest in Competency Based Education
- Increasing Use of Blended Learning Designs
- Increasing Use of Collaborative Learning Approaches

Significant Challenges Impeding Educational Technology Adoption

Solvable Challenges: Those which we both understand and know how to solve

- Blending Formal and Informal Learning
- Creating Authentic Learning Opportunities
- Improving Digital Literacy

Difficult Challenges: Those we understand but for which solutions are elusive

- Competing Models of Education
- Rethinking the Roles of Educators
- Under-resourced Campus Infrastructure

Wicked Challenges: Those that are complex to even define, much less address

- Balancing Our Connected and Unconnected Lives
- Keeping Formal Education Relevant
- Scaling Instructional Innovations

A detailed report will be published in May/June and will be available here:
<http://www.nmc.org/publication-type/technology-outlook/>

Another trend not mentioned explicitly is the deterioration in the value of qualifications as they become more widely obtained in the population. This can already be seen in the US where the two year associate degree is now regarded as of limited value. Qualification inflation is driven by the positional nature of qualifications as opposed to the intrinsic value of the actual skills or knowledge developed during education.

When only a small proportion of the workforce of any country possessed degrees they were useful information for potential employers. They indicated that the possessor was likely to be well educated compared to their peers without degrees; they were likely well motivated and able to learn new tasks. The problem is that as degree attainment becomes more common it loses this ability to signal worth as strongly. Employers are forced to become more discerning, to focus their attention on higher degrees, or more specialist degrees. Almost inevitably this pushes employers to become more exclusionary in their selection of potential employees, adding more detailed and specific requirements to their job descriptions. Students and educational institutions are not passive players in this either. Attempting to differentiate themselves, students seek more specialist qualifications, higher degrees, and combinations of degrees; essentially decorating themselves with a plumage of educational signals in the hope that one is attractive to an employer.

Crowding tends to erode the individual and collective benefit arising from increasing access to higher education, a phenomenon described variously as the 'diploma disease' (Dore, 1976; 1997) or 'opportunity trap' (Brown, 2003). Dore (1997a, 25) describes the disease as the unintended societal consequence arising from the "gap between the private cost-benefit calculation of individuals facing certain objective situations, and the social cost-benefit calculation of 'society's wisdom' in creating those objective situations."

Dore notes (1997a, 26-27) that the pathology of the disease, or affordances of the trap include the waste of social resources that can occur if escalating engagement in education in order to obtain a job merely raises the entry cost, rather than changing the qualities of the work done by the more educated person. The real loss occurs here if the lack of any significant impact on the quality of work is also matched by a lack of intrinsic benefit to the student arising from their extra education; if the student simply complies with an external expectation to achieve a pass in an examination without valuing the change in their own knowledge and capabilities. Similarly, Hirsch notes:

"An 'inflation' of educational credentials of this kind involves social waste in two dimensions. First, it absorbs excess real resources into the screening process: the lengthened obstacle course is unlikely to be the most profitable way of testing for the qualities desired, because its costs are not borne by the employers whose demands give the credentials their cash value. Second, social waste will result from disappointed expectations of individuals and from the frustration they experience in having to settle for employment in jobs in which they cannot make full use of their acquired skills." (Hirsch, 1976, 51)

Beyond this direct impact on the individual student, there is also the risk of a pathological bureaucratisation of learning and teaching as the motivating purpose of educational organisations shifts to "mere qualification earning – ritualistic, tedious, suffused with anxiety and boredom, destructive of curiosity and imagination; in short, anti-educational" (Dore, 1976, ix).

Universities and other providers have also responded to the pressures of qualification crowding by vastly increasing the range of degrees offered to encompass an ever-changing set of specialisations. This growth introduces a set of problems all of its own. Institutions face the cost of providing the supporting infrastructure and systems for a growing number of qualifications without a corresponding increase in the number of students. Each new qualification carries a burden of administrative and regulatory compliance; each requires resources including teaching facilities and suitably qualified staff. Instead of a few large qualifications taught by staff with broad expertise, institutions have a myriad of qualifications with small numbers of students needing specialist experts as teachers. Differences in the qualifications offered by different institutions and in different countries become challenging for employers and other institutions to recognise.

In the absence of some form of control over the scale of the system, the absence of any absolutely reliable measures of the quality of individual learning outcomes mean that the system

is likely to continue to grow in cost and complexity without any corresponding improvement in the capabilities of the student or their contribution to society in general (economic or otherwise). The spread of degree granting powers to a wider range of providers greatly increases the pace with which the degree will decline in value to society, both by growth in numbers but also through an inevitable dilution in the sense of coherence the degree currently has in a range of qualities.

Q48

Are there other important types of new model that should be included within the scope of this inquiry?

Page 74

The list of models doesn't recognise that the system is currently designed to focus on institutions and qualifications, not students as individuals. This leads to great complexity when attempting to create different models that violate one or other of these assumptions. An example is the Victoria Masters Programme in Geographical Information Systems (MGIS) which is taught as a combination of courses provided by multiple universities. This has a number of significant advantages for the students and the country but has required extraordinary commitment by the staff to work around administrative and practical hurdles as every University is operated as a completely separate system and reporting expectations of external agencies cannot cope with multi-institutional collaborations of this type.

Details regarding the MGIS are available on the <http://www.mgis.ac.nz/> website, in particular the page on Applying for the programme illustrates the complex admin processes imposed by the current system.

Q25

When do the TEC's independent funding role and its Crown monitoring role align, and when are they in tension?

Page 25**Q26**

What are the pros and cons of different quality assurance arrangements for universities to those for ITPs, wānanga, and PTEs?

Page 26**Q50**

Are current quality assurance and accountability arrangements robust enough to support a wide range of new models?

Page 75**Q68**

What impact has Performance-Linked Funding had on providers' incentives to innovate?

Page 86

Tertiary education quality in New Zealand is addressed primarily through the operations of three organizations working with tertiary education organizations: the Tertiary Education Commission (TEC) responsible for allocating government funding in line with government priorities and accounting for its effective use; the New Zealand Qualifications Authority (NZQA) responsible for all other tertiary education providers (Industry Training Organizations, Private and Government Training Enterprises, Institutes of Technology and Polytechnic, Māori providers including Wananga, and Schools); and the Academic Quality Agency for New Zealand Universities (AQA).

The current approaches are theoretically capable of supporting a wide range of models, and encouraging experimentation (see also below answers to Q59-63) but in practice the application of the Educational Performance Indicators and the approach of the various quality agencies have acted as barriers to changing models. The quality model for tertiary education in New Zealand is

entirely instrumental in focus with a strong focus on quality value for money through pressure to achieve high course and qualification completion rates, and quality as fitness for purpose defined almost exclusively by employment outcomes.

TEC

All institutions receiving public funds for tertiary education are subject to quality controls operated by the Tertiary Education Commission (TEC). These include investment plans aligning funding to the number of students enrolled and the courses and programmes, and educational performance indicators assessing course completion, qualification completion, progression to higher level study, and retention in study, which are used to impose minimum performance standards on providers. The direct controls include the use of performance thresholds that place a proportion of the student funding at risk if the threshold is not exceeded, the indirect control includes their use as evidence of performance under the NZQA processes described below. These indicators have had a substantial impact on the behaviour of providers, being cited in review documentation generated under the auspices of the other quality agencies as a major driver of changes in student enrolment processes and in the management of students within qualifications.

NZQA

NZQA operate two main quality processes affecting tertiary education in New Zealand. These are an annual monitoring process relating to accreditation requirements and a self-review and external assessment process operated on a four-yearly cycle.

The monitoring process is aimed at ensuring that courses and programmes comply with the conditions of their accreditation approvals and that standards of achievement are being applied appropriately. This process clearly has a significant impact on the quality of provision and potentially can act either to encourage or discourage changing modes of delivery depending on the flexibility of the accreditation requirements and the expectations made by the monitors.

The second, and far more visible quality process is the self-review and external evaluation and review process, also described as the Evaluative Quality Assurance Framework. The NZQA External Evaluation and Review Policy and Guidelines (<http://www.nzqa.govt.nz/providers-partners/external-evaluation-and-review/policy-and-guidelines-eer/introduction/>) state:

The evidence used by NZQA for quality assurance is a self-review portfolio developed by the TEO responding to these priorities and guided by the NZQA Tertiary Evaluation Indicators (<http://www.nzqa.govt.nz/assets/Providers-and-partners/Registration-and-accreditation/Self-assessment/TEIs.pdf>). In practice, these indicators are not quality measures as such, but rather a general summary of political priorities that are subsumed by the requirement for TEOs and reviewers to focus on achievement numbers. There is nothing in these indicators that speaks to the impact of technology on models of education and no specific encouragement or expectation that technology be used to motivate improvements in the educational processes or outcomes.

The focus of NZQA's quality process is most apparent in the 2014 statement "NZQA's judgements about educational performance are primarily formed through a robust evaluation of learner achievement data and information about outcomes" made in response to the external review of the quality framework (<http://www.nzqa.govt.nz/providers-partners/external-evaluation-and-review/how-nzqa-evaluates-educational-performance-in-external-evaluation-and-review/>). In practice, this robust evaluation is dominated by the TEC EPI data as evidenced by the published External Evaluation and Review reports. It is very clear that this data forms the core of the confidence recommendations made as part of the process, while other aspects are secondarily important and have very little impact on the assessment outcomes.

The NZQA guidelines state that "Evidence of actual learner achievement, including, where possible, the progress or value-added component, is the primary indicator of effective educational delivery." (<http://www.nzqa.govt.nz/providers-partners/external-evaluation-and-review/policy-and-guidelines-eer/undertaking-external-evaluation-and-review/>). However there is

no evidence from the available reports or the external review that the value-added component is measured in any way other than the aggregate measures of cohort achievement generated through the EPI process.

The NZQA self review and external evaluation process was subjected to an external review in 2012. This raised issues with the overall consistency of the evaluations being made and noted issues with the support provided to institutions engaging in their self-reviews. This latter weakness is an issue if the self-review process is to be aspirational for the quality of the system, particularly with regard to the development of new or different capabilities needed to use technology effectively. The weaknesses of the quality system when TEOs were addressing diversity in the learner population was also noted, further supporting a sense that the process would not cope well with the significant changes associated with e-learning provision.

A particular issue is the lack of evidence regarding the actual impact of the quality process on the educational activities of TEOs. The external review noted “there is insufficient information available on the outcomes from the system to be certain of its benefits at this time” (p. 17). No formal and systematic analysis of the outcomes from the self-review and evaluation process is available to date.

Subsequent to the external review NZQA has undertaken an internal project to respond to the recommendations. This has seen the publication of five self-review case studies, none of which address the potential of technology to push sense-making and change the models of provision. The only major change to the quality process has been a further strengthening from 2014 of the requirements regarding the reporting of performance information, essentially increasing the detail and requiring a further break-down of results aligned to the Tertiary Education Strategy priorities.

As well as being dominated by a focus on qualifications (as opposed to learning) the NZQA process is also defined by the focus on discrete institutions. While contracted out provision is acknowledged, nothing in the NZQA process encourages collaboration between providers. This reinforces an unhelpful competition between publicly funded providers and reduces the impact of that funding.

Despite these failings, this system is clearly functioning as intended and as designed. The quality mechanisms as implemented are strongly aligned to the Government’s Tertiary Education Strategy priorities aimed at increasing the direct impact of education on employment and economic activity, increased participation by Māori, Pasifika and school-leavers, and maximising the export earnings associated with education (New Zealand Government, 2014).

AQA

Academic Audit: The process of quality assessment by which an external body ensures that the overall (internal and external) quality assurance procedures of an institution are adequate and are actually being carried out. As with the NZQA process the AQA Academic Audit looks at the system for achieving good quality and does not address in any way the qualities of the education provided.

The fifth round of AQA Academic Audits commenced in 2013. The focus of this round is particularly on learning, teaching and student support. Four universities have completed their audits, Massey, Auckland, Victoria and Canterbury, with the others scheduled for completion in 2015 and 2016.

As with the NZQA process, the AQA audit is framed and focused by a confidential self-review portfolio developed by the university. A small panel visits to explore the portfolio in a series of interviews with senior staff and produces a report that is published by the AQA following a response period. AQA specifically note in their documentation that the audits are not compliance audits and universities are free to simply note they are taking no further action with regard to any recommendation.

AQA audits are not in themselves consequential, they have no impact on funding and any impact is entirely dependent on the alignment of the recommendations with university priorities. The collegial nature of the process combined with the focus on self determination of priorities and evidence mean that these audits are unlikely to ever stimulate a re-examination of university priorities, mechanisms or focus. Unlike the NZQA process, the AQA academic audits have been operating in a relatively similar form for sufficiently long that it is possible to compare reports over time. Although the focus of audit has shifted between cycles it is clear that the quality model is very much aimed at incremental improvements of existing activities dominated by internal systems and process improvements with no real evidence of any impact on student outcomes (Shah, 2013; Boswell, 2015).

Q52

What can be learnt from the tertiary education systems of other countries? Are there models that could be usefully applied here? **Page 77**

Extensive research conducted over the last decade using the e-learning maturity model to survey a range of US, UK and Australian institutions (Universities and Further Education providers) has shown that the issues facing New Zealand universities are also challenging those institutions. Investment in new technologies has primarily been aimed at building infrastructure both online and in campus facilities such as lecture theatres. Consistently there is little evidence of a sustained, strategic push to develop new models. Instead there are many examples of institutions engaging in one-off and disconnected projects that are rarely sustained beyond the initial implementation. There are many examples of pedagogical models that have been developed and promoted on a smaller scale, such as the active learning models behind the “flipped classroom” or “scale-up” model used to improve student engagement in face to face contexts, but these have not been translated into systematic and large-scale changes in the model of any institution.

Arguably New Zealand should consider models such as the German one where there is significant streaming of tertiary education aligned strongly to the school system and to the wider social and economic context the students enter upon completing their studies. Although this seems contrary to the ideal of equal access for all, the significant challenges facing individuals and the country in paying for open access are a clear counter argument.

Q59	How innovative do you consider the New Zealand tertiary education system is? Do you agree that there is “considerable inertia” in the system compared to other countries? If so, in what way and why?	Page 81
Q60	What are the factors associated with successful innovation in the tertiary education system?	Page 81
Q61	What are the benefits to innovators in the tertiary education system? What challenges do they face in capturing these benefits?	Page 81
Q62	What are the barriers to innovation in the tertiary education system? What might happen if those barriers are lowered?	Page 81
Q63	How well do innovations spread in the tertiary education system? What helps or hinders their diffusion?	Page 81
Q72	Do New Zealand’s tertiary policy and regulatory frameworks enable or hinder innovation? What might happen if existing constraints are loosened?	Page 90
Q74	How does the Crown’s approach to its ownership role affect TEI behaviour? Is it conducive to innovation?	Page 92
Q77	How do tertiary providers create incentives for internal participants to innovate? What kinds of choices by providers have the biggest “downstream effects” on their level of innovation?	Page 93

These questions all share a common weakness which is treating innovation as a thing with an independent existence of its own. The commentary suggests that the focus is on change, particularly change that includes modifications or introduction of new delivery models. Not all changes are “innovative” but this not to say that they are not useful.

The problem with innovation language, including the other words commonly used with it (transformation, disruption, even excellence) is that they establish an expectation for dramatic change that can discourage attempts to create a culture within educational organizations that is open to exploration of new ideas and encouraging to staff attempting to build their understanding of the implications of new ideas or tools. A particular issue is that this leads to a culture of rewards and incentives only being used with substantial successes, rather than recognising the systematic leadership needed to encourage smaller changes and to be supportive of those prepared to try and fail in interesting ways. The Silicon Valley motto “fail fast, fail often” represents an extreme in this context but does so in order to encourage organizations to be resilient and learn from failure as well as success.

More generally, the wider system in New Zealand embodies a complex set of barriers to significant change that are a result of misaligned priorities and policies. These are discussed in detail in the following paper:

Marshall, S. (2014): Technological innovation of higher education in New Zealand: a wicked problem?, *Studies in Higher Education*, DOI: 10.1080/03075079.2014.927849

A copy of this paper can be provided on request, but is not included in this submission for copyright reasons.

Q75

Do regulatory or funding settings encourage or discourage providers from engaging in joint ventures? If so, how?

Page 93

The current TEC EPIs report on cohort outcomes on a qualification and provider basis. Students that move between providers only represent success for the provider who issues the final qualification, with no acknowledgement or recognition of the contribution other providers make to the student's success. This creates an incentive to minimise the flexibility available to students and to create barriers to the recognition of work completed by other providers.

The rise of New Public Management ideologies based on market models that are a poor fit to wider social objectives for education have also led to a CEO culture and competition between providers in some parts of the country as they seek to obtain access to sufficient students, or students with the lowest cost to teach (due to subject choice or quality of the student).

The biggest barrier however is the administrative complexity of sharing information and managing funding and contractual arrangements particularly when more than two TEOs are involved. Any venture needs large numbers of students prepared to pay significant fees to make it worthwhile. The VUW MGIS example noted in Q48 illustrates the issues.