

Sustainability in the NZ Tertiary Sector

Observations and recommendations for delivering
education for sustainability in the tertiary sector



Sustainability in the NZ Tertiary Sector: A Short Report

Observations and recommendations for delivering education for sustainability in the tertiary sector

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Aaron recently completed a Masters in Environmental Studies at Victoria University, which evaluated the Wellington Regional Genuine Progress Index. During his time as a student, Aaron successfully led a student petition for Victoria University to develop an Environmental Policy. Aaron was then elected to the University's Environmental committee, which was established to implement the Environmental Policy. Also as a student, Aaron founded 350 Aotearoa, a youth-led climate change organisation linked to 350.org, which coordinated the world's most widespread day of climate change action, with over 5000 actions in 181 countries. Aaron continues to work on climate change with a New Zealand and Pacific focus, through 350 Aotearoa. He is also been an active member of the ReGeneration network.

Introduction

In the first half of 2010, I made visits to tertiary institutions around Aotearoa, NZ to find out how sustainability is being adopted in tertiary institutions. I met with over 60 staff and students from all eight universities, seven of the 20 polytechnics and one of the three *whare wānanga*. In particular I was investigating three areas:

1. Courses that institutions run relevant to sustainability
2. Innovative institutional practices around sustainability
3. Active student groups on campus with a sustainability focus.

The main purpose of this research was to contribute to a resource being developed by the ReGeneration network for secondary school leavers thinking about doing tertiary study. This resource is due to be released in October 2010.

However, we were also interested in what we could find out about the bigger picture of how sustainability is being adopted in the tertiary sector. One quote in particular, cited by Williams (2009), provided the impetus for this inquiry: *"the modern university is still 'deeply involved in providing expertise for an 'unsustainable' world economy."* (Clugston & Calder, 1999). I wanted to find out whether this was still true of the NZ tertiary sector, and to be able to identify some of the emergent trends and gaps, as well as to draw out the opportunities for the tertiary sector.

What is ReGen?

The ReGeneration project was created by a group of young New Zealanders who are working to create positive social, environmental and creative change. It's a network as well as a project, so many of the events focus on connecting up with young changemakers (aged roughly 15-25) from all around Aotearoa. The project was launched in February 2009 and has been developed with support from The Enviroschools Foundation, The Tindall Foundation and the New Zealand Council for Educational Research.

Methodology

At each institution, I aimed to meet with a range of people, including:

- Academic staff involved with sustainability teaching or initiatives
- Staff involved with operational management
- Senior management staff
- Student association officers (Environmental Officer, President etc)
- Leaders of student clubs focused on sustainability

For each of the universities and some of the polytechnics I successfully engaged with people from at least three of the above categories. While for the remaining polytechnics and the *whare wānanga*, my primary point of contact was with either senior management staff, staff involved with operational management or academic staff. 95% of my meetings were held face to face, and on campus. The information gleaned from these meetings has been complemented with reviews of institutional policies, strategies and websites. This research is limited in that it is not a comprehensive picture, and has not rigorously assessed each institution. It's more like a snapshot of where things are at in the year 2010.

Previous studies of sustainability in the NZ tertiary sector

There is not a great depth of previous studies that have investigated the integration of sustainability into New Zealand's tertiary sector. For example, Bolstad et al. (2008) found that research into EfS in the tertiary sector was still a fledgling field of study, and identified just a handful of Masters theses where it had been addressed (Douglas, 2002; Dowsett, 2001; Cutler-Welsh, 2004).

The 'See Change' report released by the Commissioner for the Environment in 2004 was one of the earlier and most comprehensive reports on Education for Sustainability in the tertiary sector. At the time it found progress toward EfS in the Tertiary sector (amongst others) to be slow and limited. In particular, both the Tertiary Education Strategy and Statement of Tertiary Education Priorities were found to have only broad references to environmental sustainability. The evaluation of the See Change report in 2007 (see Figure 1) then found that some limited progress was made between 2004 and 2007.

Figure 1. 'See Change' Evaluation of Tertiary Sector Action Areas, 2007

1. Tertiary graduates leaving institutes with a core understanding of sustainability and environmental sustainability as a result of institutes encouraging EfS throughout their organisations.
>Partly accepted and implemented
2. Tertiary education institutes addressing the ways that knowledge is sliced up into many different disciplines and supporting learning across boundaries, while still allowing subject specialists.
>Partly accepted but not yet implemented
3. EfS should be a priority in the government's vision for the tertiary sector, and government should work with the Tertiary Education Commission to achieve this.
>Partly accepted but not yet implemented

Source: Parliamentary Commissioner for the Environment, 2007:8

Stone & Baldoni (2006) reviewed the prevalence of sustainability as a component of courses across different disciplines, as well as the availability of interdisciplinary courses. They found sustainability taught *"in a range of disciplines, although science, engineering/technology and planning programmes are the most common. Business and law programmes are the least common, and some disciplines such as medicine, arts, humanities and education have no whole, named programmes."*

They also highlighted that many efforts to implement interdisciplinary courses face a range of challenges. More recently, Williams (2009) identified the key challenges faced by interdisciplinary courses:

- Universities have been designed to deliver specialised knowledge, which has created a culture of independence between departments (siloeing)
- Different management and accounting structures in different departments
- The extremely competitive nature of funding
- Lack of funding aimed directly at sustainability
- The corporate/business management structure of universities
- Lack of understanding or buy-in into sustainability by staff

Another significant barrier to adopting sustainability strategies is the lack of support from senior management, particularly the Vice-Chancellor or Chief Executive (Stone & Baldoni, 2006; PCE, 2007; Williams, 2009). The most recent and comprehensive study (by Williams in 2009) found progress toward the 'See Change' goals to be limited, disjointed and scattered like pieces of a jigsaw.

This research builds somewhat on these previous studies, and rather than beating around the bush talking about it, the primary focus of the following discussion is to provide recommendations that could start to bring the pieces of the tertiary sustainability jigsaw puzzle closer together.

What does this research add?

Over the course of this research I was pleasantly surprised at the progress that institutions claim to be and genuinely are making toward sustainability. One of the things that stood out for me is that the institutions are at very different stages along their journey toward sustainability, from taking the first steps, to integrating it into everything they do. So if anything, this research tells a more hopeful picture of how sustainability is being integrated into our tertiary institutions than previous studies have. But there still remain many disparate parts of the puzzle. Summaries of my observations of each institution are in Appendix 1.

1. Pulling together the pieces of the puzzle and supporting best practice

Internationally, the New Zealand tertiary sector is well behind the times in collaborating on the implementation of sustainability. Part of the problem is, as Williams (2009) highlighted, the disorganised and scattered nature of approaches to sustainability. Contrast this to Australian tertiary institutions, which are usually much better connected, organised and further down the path to sustainability. Generally speaking, institutions in NZ are only just starting to realise that to remain internationally competitive, they not only have to talk about sustainability, but they also have to deliver it. Thus there is a real need for institutions to share their efforts and learnings, which will improve the efficiency and application of best practice. We recommend that institutions:

- Actively join and support the recently formed network, 'Sustainability in Tertiary Education in NZ' (STENZ). Although in its infancy, STENZ could be an important vehicle for putting the scattered pieces of the puzzle together and bringing NZ tertiary institutions up to speed internationally. It has been established by many of the leading Education for Sustainability advocates around NZ. (see: <http://wikieducator.org/Stenz>)
- Consider becoming a member of the 'Australasian Campuses Toward Sustainability' association. This association is well established, as most of the Australian universities are members. Thus there is a real depth of resources available through the website and the annual conference etc. The University of Canterbury is the only New Zealand institution that is currently a member. (see: <http://acts.asn.au/>)

Other important steps include:

- Establish an award system that tertiary institutions can work toward. The emphasis should be on applying good practice sustainability, into operations, teaching and practice (or a 'whole university/polytechnic' approach). This could be modeled on the very successful Enviroschools award system which 25% of schools around NZ are involved with. It could be delivered by a group such as STENZ and possibly in collaboration with Enviroschools and the ReGen network.
- Build a stronger case for institutions to adopt a 'whole university/polytechnic' commitment to sustainability. Sustainability can quickly get buried by seemingly more pressing issues. So there often needs to be clear value propositions linked with sustainability, beyond just the moral imperative. Some of these are:
 - Increasing demand: Demand for taking sustainability related subjects is increasing and will continue to do so in the coming decade. From 2010 onward, at least 25% of all school leavers will have been through the Enviroschools programme, through which students become actively engaged in sustainability issues.
 - International competitiveness: tertiary institutions risk losing their competitive edge if they do not profile and continually improve their commitment to sustainability
- Adopt rigorous methodologies for measuring and implementing sustainability. See the Otago Polytechnic case study example below.
- Most institutions have 'Environmental Managers', which then means their focus is primarily operational. Institutions need 'Sustainability Advocates' who can work proactively with staff and students, as well as addressing operational matters. The University of Canterbury and Christchurch Polytechnic Institute of Technology both have sustainability advocates, who deliver professional staff development on sustainability, support student sustainability clubs and assist with the development and implementation of a sustainability strategy.
- Establish Sustainability Centers to act as hubs for the implementation of sustainability. They should be in a central and visible place on campus.
- Adopt the concept of the campus as a living laboratory for action learning about sustainability
- Give special treatment and support to the development of interdisciplinary courses



Otago Polytechnic: Delivering Sustainable Practice

"It's not just about being green, it's as much about the people laying the asphalt on the road as the conservationists."

Otago polytechnic is the only institution in New Zealand to have taken on the challenge of providing sustainability as a component of all courses that they offer. It is still in the early stages of doing this, but the strategic thinking behind how to apply education for sustainability in a rigorous and effective way provides plenty of insights for other institutions. Here are a few of the background strategies:

- The core outcome that the Polytechnic is working toward is for each student to understand and be able to apply sustainable practice in their future workplace and at home.
- On each intake, a baseline study, which measures people's opinions about sustainability is done (using the 'new ecological paradigm')
- Depending on where people score, they may face quite different boundaries to genuinely engaging with sustainability practice. So the next question is to ask how to help people with particular barriers.
- In this way, the institution is consistently adapting itself to meet the learning needs of students, and to do that, it is important that sustainability is positively focused and communicated effectively.
- They usually find that people's opinions and understanding of sustainability can be categorised according to their discipline.
- Therefore what is required to teach students about sustainability in different disciplines is quite different.
- Audits of how sustainability is integrated in end of year projects are used as one indicator of success.

There are a range of other steps and processes that the Polytech is using, and one of their senior staff members, Sam Mann, has recently written a book which details these efforts (shortly to be released).

2. What is needed to support and engage senior management, staff and students?

Taking a 'whole university/polytechnic' approach to sustainability requires a concerted effort from senior management, staff and students across the institution. It became obvious during this research that senior management, staff and students all have different needs and face different barriers in the implementation of sustainability. Here are some suggestions:

Senior Management: leadership on sustainability is emerging

In the last two years, two great examples of senior management leadership on sustainability have emerged, with the commitment to a 'whole university/polytechnic' approach at Otago Polytechnic, and the University of Auckland's commitment through the U21 programme. These have both been led by senior management, and particularly the chief-executive/vice-chancellor.

However, in the majority of institutions, senior management teams can be the primary blockage to delivering on sustainability. Williams (2009) provides a detailed model for building leadership on sustainability in tertiary institutions, in which she stresses the importance of senior management leadership. During this research I came across a number of cases where sustainability policies and strategies had flopped or been excessively delayed due to a lack of leadership from senior management. To get around this, the following steps can be useful:

- Senior management face multiple pressures and thus there is a need to provide strong value propositions in order to gain traction on sustainability issues.
- Sometimes petitions from staff and students can be effective at stimulating senior leadership into action
- A more proactive step is for staff and students to lead research that identifies action areas and opportunities for institutions

What is University of Auckland doing about sustainability?

The University of Auckland has recently signed up to the Universitas 21 (U21) network, which is made up of 21 universities from around the world. Being a signatory of U21, the university is committed to addressing sustainable development in five areas:

- a) Research towards sustainable futures
- b) Education for sustainability
- c) Universities as living laboratories for sustainability
- d) Enhancing citizenship and engagement
- e) Building capacity through cross network collaboration and action

Staff: Sustainability Champions often lead the way

“There is huge good will amongst academic staff to help out with stuff - that’s ultimately what many of us are here for” - Ross MacDonald, University of Auckland

More often than not, academic staff lead moves to develop a sustainability or environmental policy. Sustainability champions emerge across a range of disciplines, often work slavishly and don’t get a lot of recognition or support for the work they do. Thus there is a real need for institutions to better recognise and support the role that Sustainability Champions do play. We recommend that institutions:

- Provide annual awards for sustainability champions (this could also be done by a network body like STENZ)
- Prioritise the promotion of academic and non-academic sustainability initiatives and research
- Provide frequent staff professional development training to aid the teaching about sustainability

Sustainability Advocates at the University of Canterbury

The sustainability efforts at UC are a great example of how sustainability champions can work collaboratively with students and other staff to effect considerable change within the organisation. The Environmental Manager at UC, Kate Hewson renamed her position to ‘sustainability advocate’, with the result being that she now plays a more proactive role in engaging the University as a whole in sustainability initiatives. At the centre of these efforts is the Okeover community garden on campus, which was initiated by Kakariki, the student environmental group on campus in 2002 and is now managed by a mixture of staff and students. It’s now the focal point for meetings and is a flourishing garden that students and staff can get involved with. The sustainability advocate has been so successful that they now have two sustainability advocates working fulltime with a range of other people also involved at Sustainability office.

Students: Some get actively engaged, most don’t.

Supporting students to become actively engaged in learning and action for sustainability is challenging, and few institutions are doing well in this regard. There’s two layers to engaging with students:

1. Supporting those who proactively get involved in sustainability issues and,
2. Supporting all students to learn about sustainability.

Supporting students who proactively get involved

These are mainly the students who get involved with student clubs. Traditionally, student clubs have been supported by the student associations, however, should the moves at the parliamentary level toward ‘voluntary student membership’ go ahead, students’ associations will lose much of their core funding. This highlights the importance of having a ‘sustainability advocate’ who is employed by the institution who can as part of their role work with student clubs. Sustainability advocates also provide an accessible link between the aspirations of the institution and students. The University of Canterbury summary provides a great example of how the sustainability advocate model has been successful.

Supporting student sustainability clubs should be a priority for institutions because they can act as the interface between the goals of a sustainability strategy and other students.

Some further points:

- Student clubs tend to ebb and flow as students come and go.
- Students usually have to juggle multiple pressures
- There are few networking opportunities for active students to connect up with other active students at different campuses. The ReGen network can provide a supporting role in this way.
- Institutions should provide greater recognition for students and student groups who are actively engaged
- Institutions should profile student groups on the institutions’ sustainability portal on the website
- Institutions should provide clear and accessible information about sustainability options on their websites. A handful of institutions have compiled lists of courses that have sustainability components, these should also be made accessible on websites.



Supporting all students to engage

The most obvious and successful way to engage with all students is through coursework. Otago Polytechnic is the obvious example of how this can be done, while other institutions provide great examples of how to actively engage students through coursework (such as the Victoria University School of Architecture & Design coursework). Other recommendations include:

- Provide better access to information about sustainability. Save a few, institutions generally are doing a poor job of providing students with accessible information about their options for studying sustainability, and ways that they can get involved. This can be done by providing - website etc
- Provide more scholarships and internships for sustainability related research and initiatives
- Institutions need to show that they are proactive about sustainability, and approach it positively

Education for sustainability at VUW School of Architecture & Design

Sustainable design and Regenerative development have been recognised as essential knowledge and practice for all architecture students. All first year students in the Bachelor of Architecture programme take a compulsory sustainable architecture paper. This is followed with optional papers in both the second and third year. These topics also filter into a broad range of papers offered at the school. The second year paper “Arch 222 - Sustainable Architecture” requires students to do group projects that make an intervention to address the causes of climate change. The School has invested in following through on some of the student group projects, such as building a living wall at the school.

And finally, there were lots of interesting examples of good practice sustainable campus management. Efforts at EIT in particular make a great story - see the box below.

Sustainable operations at Eastern Institute of Technology (EIT)

The philosophy at EIT is to integrate sustainable campus management into business as usual ‘calmly and without fanfare’. For example, all new buildings are being built to meet five-star Green building standards, and refurbishments must meet four-star standards. While the waste minimization strategy has meant that all organic waste is composted on-site, using large-scale bokashi bins. Facilities management staff spent time refining the bokashi composting system, which involves the following steps:

1. Food and organic waste is discarded into compost bins around campus, bokashi powder is added regularly to start fermentation/decomposition
2. Once full, the waste is left to ferment for a month or so in a 20-litre bucket, excess fluid that flows out is bottled and sold or used as liquid fertiliser
3. Then it is mixed into the first stage of the three large compost pile, where grass clippings etc are added, and it is moved along as it composts
4. Once compost is ready, it is either used on campus gardens or sold

Because Facilities Management has invested time into designing and sourcing their own system, they take the time to promote their system to students, staff and local schools. Education campaigns to ensure that the waste management system works well for staff and students have been reasonably successful, but engaging the student population remains the greatest challenge. As well as the composting, EIT has a full programme of recycling.

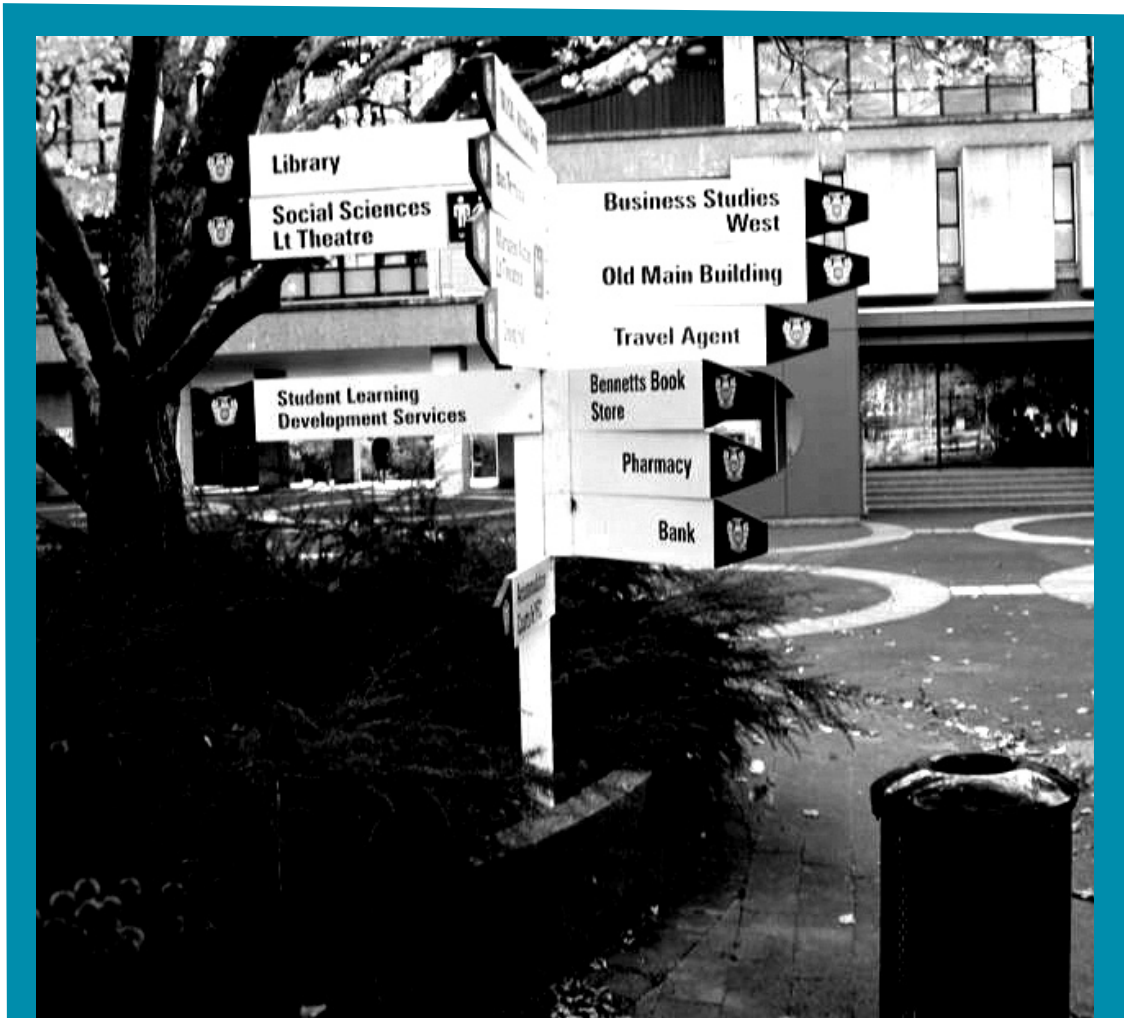
The Closing Word

To close, we return to the quote by Clugston & Calder (1999), which in part stimulated this inquiry: *“the modern university is still “deeply involved in providing expertise for an ‘unsustainable’ world economy.”* There are many aspects of the tertiary sector that continue to provide expertise for an ‘unsustainable’ world economy, however, it is also clear that most of the tertiary sector is in some form of a transition away from that model. Thus there remains much to be done to bring NZ tertiary institutions up to speed on sustainability, and to draw the pieces of the puzzle closer together. In doing so, it’s important to focus on the opportunities that exist for sharing experiences and creative solutions. In my experience this sharing just isn’t happening - everyone is off on their own path, a scattered piece of jigsaw puzzle. This disparate approach misses the opportunity of sharing knowledge, experience and resources. In a time where the tertiary sector is under intense pressure, such sharing is an imperative. It’s also an imperative because pursuing a path toward sustainability requires us to step out of our silos and work together.

There are some great things happening in our tertiary sector that we can be proud of, but there’s also plenty of instances where nothing is happening. We’d like to see that changed. This research has been by no means comprehensive, but we see it as an injection of energy aiming to spur action toward sustainability in the Tertiary sector. And it’s not the last you’ll hear from us.

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Appendix 1: Institution summaries

Victoria University of Wellington (VUW)

What is VUW doing about sustainability?

Following pressure from student groups, VUW announced its commitment to environmental sustainability in 2006, with the release of the environmental policy. To aid the implementation of the policy, an Environmental manager position at Facilities Management was introduced, as well as an Environmental Committee, which consists of academic and non-academic staff, and students. The university has published its own sustainability guide, which can be found on the VUW website by searching with the term 'sustainability'. This provides a useful overview of the range of initiatives underway and what you can do to live sustainably. Overall, VUW has made a solid effort at implementing sustainable practice into its operations.

What courses are offered with a sustainability focus?

VUW offers a range of courses related to sustainability, with over 50 courses specifically related to environmental sustainability from 13 different schools, and numerous other courses where sustainability forms part of the programme. It would be helpful if they provided a list of these on their website! Also, there is no overarching strategy for how sustainability is integrated into teaching. And like most other tertiary institutions it is struggling to effectively engage with staff and students beyond those who are naturally interested and get involved.

University of Waikato (UoW)

What is UoW doing about sustainability?

In 2008, UoW released a report focused on the 'options and opportunities' for campus environmental sustainability, which concluded that UoW had high standards of sustainable campus management, *but lags in the area of programmes to encourage staff and students to adopt more environmentally-friendly habits and practices.*

Since the report, progress has been slow, and at the time of writing (May 2010), they are still looking to appoint an Environmental Coordinator, who will be responsible for developing an Environmental Management Plan. It remains to be seen whether the coordinator will fulfill the role of a sustainability advocate, who would work with staff and students. Details about UoW's commitment to sustainable development are provided on the website. Some within the institution feel that this commitment to sustainability has not been effectively translated into action.

What courses are offered with a sustainability focus?

Sustainability is featured in courses offered across a considerable range of disciplines and is also one of the university's priority research areas. For example, one third of publications by the Management School between 2003 & 2007 focused on social and sustainable development. The university has compiled a list of the various courses that feature sustainability elements, however, it is not available for public viewing.

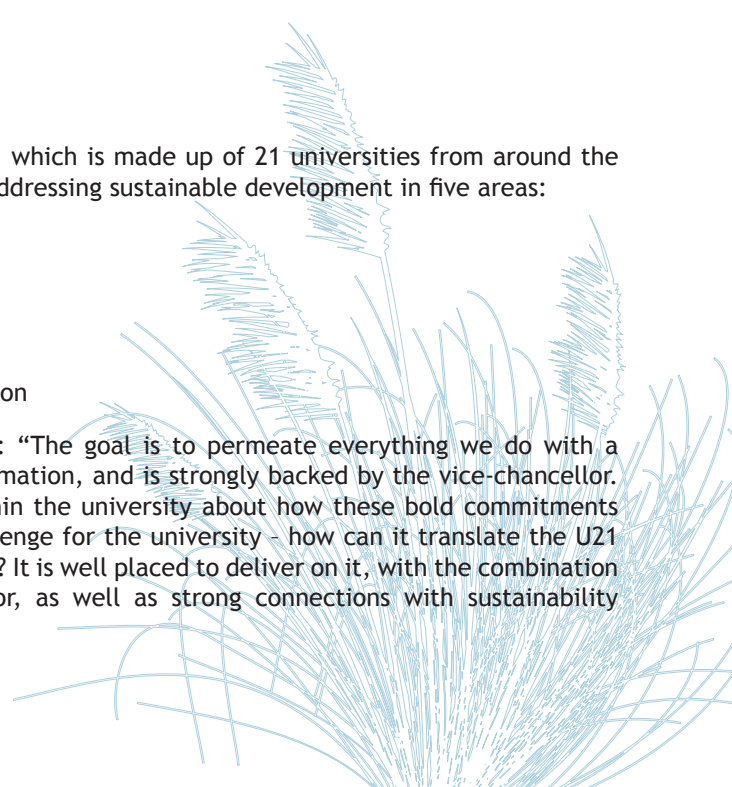
University of Auckland (UoA)

What is UoA doing about sustainability?

UoA has recently signed up to the Universitas 21 (U21) network, which is made up of 21 universities from around the world. Being a signatory of U21, the university is committed to addressing sustainable development in five areas:

- a) Research towards sustainable futures
- b) Education for sustainability
- c) Universities as living laboratories for sustainability
- d) Enhancing citizenship and engagement
- e) Building capacity through cross network collaboration and action

A staff member offered another take on the U21 commitment: "The goal is to permeate everything we do with a consciousness". So U21 is really focused at institutional transformation, and is strongly backed by the vice-chancellor. Despite these efforts, there remains some skepticism from within the university about how these bold commitments will filter down to staff and students. And there lies the challenge for the university - how can it translate the U21 commitment into meaningful engagement with staff and students? It is well placed to deliver on it, with the combination of leadership from senior management and the vice-chancellor, as well as strong connections with sustainability champions around the institution.



What courses are offered with a sustainability focus?

UA has compiled a list of the courses on offer related to Sustainability, and in summary it claims that there are over 160 undergraduate and 110 postgraduate courses offered, by over 155 academic staff members. An overview of some of these are available on the UoA sustainability portal on the website, which can be found by searching with the word 'sustainability'.

Auckland University of Technology (AUT)

What is AUT doing about sustainability?

AUT does not have a particularly visible commitment to sustainability and lacks any sustainability policies. Leadership on sustainability at AUT hasn't come from the top, but from champions, at the grassroots, so it is integrated into decision-making in an ad hoc way. Furthermore, many aspects of what the university does do fall within the realm sustainability, with for example, the strong focus on community stewardship, where some students get actively involved in solving problems facing the communities directly surrounding the university. Facilities Management is looking to employ an environmental manager, who would be responsible for integrating good practice environmental management into the university's operations. Beyond the operational side of things, there is no directed approach or strategy to implementing sustainability education and practice.

What courses are offered with a sustainability focus?

There are about 40 people doing sustainability-orientated research at AUT and this is starting to have effect. For example, the Business School is soon to have a major in Business and Sustainability. A comprehensive review of the sustainability-focused courses at AUT has not been done. Staff at AUT feel that the onus is really on the University to provide structures and programmes through which sustainability can be taught. One major point of difference that AUT offers to the other universities is with its focus on smaller classes, much like the size of a school classroom.

University of Otago

What is UoO doing about sustainability?

The University of Otago is performing strongly in some areas of sustainable campus management, but this is not well integrated across the institution. For example, efforts to improve energy efficiency have been well implemented, and new buildings are being built according to green building principles. Property Services have implemented recycling across the university and have been trialing a recycling website for unwanted furniture and computers that staff and students are able to view and request. However, these successes are marred by a perception within the university that things are very fragmented, with lots of committees, but not a lot actually happening. In 2008 a report of the working party on environmental sustainability was submitted, yet follow through has been slow.

What courses are offered with a sustainability focus?

Sustainability is taught in a range of disciplines at the University of Otago. For example, Energy studies students (primarily at the post-graduate level) work with Transition Towns in putting up small wind turbines in communities and are leading photosynthesis research as a means to creating alternative energy sources. There are 'sustainability champions' in a range of disciplines, but without significant backing from senior management, education for sustainability remains a side-event.

University of Canterbury

What is UC doing about sustainability?

The sustainability efforts at UC are a great example of how sustainability champions can work collaboratively with students and other staff to effect change within the organisation. The Environmental Manager at UC, Kate Hewson renamed her position to 'sustainability advocate', with the result being that she now plays a more proactive role in engaging the University as a whole in sustainability initiatives. At the centre of these efforts is the Okeover community garden on campus, which was initiated by Kakariki, the student environmental group on campus in 2002 and is now managed by a mixture of staff and students. It's now the focal point for meetings and is a flourishing garden that students and staff can get involved with. The sustainability advocate has been so successful that they now have two sustainability advocates working fulltime with a range of other people also involved at the sustainability office.

The sustainability office also hosts a summer internship programme - where about 5 students each year are awarded scholarships to lead research projects relating to sustainability at UC. This has seen projects focused on water and stream management on campus and the successful "Eco-my-flat" programme; and is a great example of how tertiary campuses can be used as living laboratories for research. One of the recent scholarships saw the overhaul of the UC

sustainability website portal, and it is now easily the most useful and interesting sustainability website of any tertiary institution in NZ. It profiles the sustainability groups and initiatives on campus and also provides a overview of the staff and courses available that have sustainability focuses. Check it out: <http://www.sustain.canterbury.ac.nz/>

What courses are offered with a sustainability focus?

The website provides a useful overview of all of the courses across different disciplines that have sustainability components. Furthermore, an updated sustainability strategy has recently been developed, which features a stronger push on teaching and research for sustainability, but it has to get past some institutional hurdles first, so its success is dependent on strong support from senior management of the University.

Lincoln University

What is Lincoln doing about sustainability?

Operationally, the university has been performing well thanks to the long-standing environmental policy in place. An Environmental Sustainability Advisory Group is responsible for the implementation of the policy, and some effective initiatives have resulted, including a rideshare project, and reductions in resource use across a number of areas, including a commitment to zero waste. The University also has an organic farm, as well as conventional farms.

Fulfilling on the policy's commitment to leadership in "research, teaching and learning on environmental sustainability by students and staff" has proven more challenging. Things are a bit stop-start at Lincoln, and there is no real sustainability portal on the website. But we are told that there are plans afoot to have a more encompassing sustainability strategy.

Staff at Lincoln are also involved in the Enviro-town initiative in the neighbouring town of Lincoln.

What courses are offered with a sustainability focus?

The University is currently taking a survey of all the undergraduate courses it offers to see where sustainability is being taught, with the aim of releasing it in 2011. Lincoln has a broad range of qualifications specialising in environmental sustainability, and many of these involve internships. At the postgraduate level, there is an impressive range, including a sustainability-focused course that is half taught at Lincoln and half taught at a university in Austria.

Massey University (Palmerston North)

What is Massey doing about sustainability?

A fairly vague commitment to sustainability is outlined in the University's strategic plan, "The Road to 2020". Sustainability champions at Massey feel like they are banging their heads against a brick wall because Massey has lacked an over-arching framework to pull together the different aspects of sustainability on campus. However, many of them were hopeful that the review of Massey's environmental policy would provide an over-arching framework.

Operationally, the University performs strongly, with a range of initiatives underway, such as campus-wide recycling, free busses to the campus from the city, fluorescent light bulb recycling on campus and the use of biodegradable food packaging at food outlets. The Green Bikes Trust is based at Massey and is leading an initiative involving the Palmerston North City Council to build a 'Green Hub', which will provide free bicycles for students, and implement waste management services on campus (with a zero waste target) and beyond. In this way, Massey has plenty going on that students and staff can get involved with. The challenge really is for Massey (like most of the tertiary institutions) to apply the model of the University as a living laboratory, and to find ways to integrate sustainability teaching across disciplines. Interdisciplinary courses could be a good way of doing this.

What courses are offered with a sustainability focus?

Massey has a considerable range of courses and qualifications with strong sustainability components to them. As part of a yet to be released report on sustainability at Massey, a list of all the academic staff that teach sustainability in their courses has been compiled. It would be helpful if they had such a list on their website, but there is no sustainability web portal, although this is in the list of proposed next steps.



NorthTec

What is NorthTec doing about sustainability?

There is little to report on how sustainability is being applied at Northtec. It's still at the 'struggling to recycle' stage. The Polytech has a pleasant list of guiding values, but this does not mention 'sustainability' or the environment at all.

What courses are offered with a sustainability focus?

The qualifications offered in Environmental Sciences and Conservation & Environmental Management offer a solid grounding in both academic and practical fields. There are some great fieldtrips offered too - for example a snorkeling trip out to the Poor Knight Islands. Northtec also offers a course in horticulture. These courses work closely with the Department of Conservation and other organisations, and there are some intern opportunities.

Other than that, there is little to report on the engagement of staff & students in sustainability education and practice.

NMIT

What is NMIT doing about sustainability?

NMIT is another good example of how sustainability champions can work with senior management and students to get things going. Much of the drive for recycling began with staff and students in the Diploma of Tourism management. As part of their course, students carried out a survey of staff and students to see what they knew about recycling and whether they would support recycling on campus. The results were overwhelmingly positive and so recycling has just been introduced. This is coupled with new 'greenzones' going in around the campus.

What courses are offered with a sustainability focus?

Sustainability is a strong component of the Tourism Management and Adventure Tourism courses, and NMIT also offers the only DOC approved ranger trainee programme in NZ. However, it is unclear how education for sustainability is to be integrated further as the Sustainability Policy provides an ambiguous commitment: "Continuing to develop environmentally sustainable teaching and learning approaches." While this could be stronger, it is an important starting point for the implementation of wider education for sustainability efforts.

Otago Polytech

What is Otago Polytech doing about sustainability?

The Polytech's chief executive, Phil Ker, has thrown the full weight of the institution behind the sustainability strategy. This leadership has been important, as applying sustainability into everything the polytechnic does has required some big shifts in thinking and ways of operating. As a first step, a sustainability audit of the Polytech's operations was commissioned, which created a range of action areas in for example energy, waste and product procurement (which has a concern for the whole life-cycles of products that are purchased). An important aspect has been a drive to source products and consumables locally, which has seen a considerable proportion of the Polytech's lawn replaced with productive gardens. These include pigment gardens for the Art department, vegetable gardens for the hospitality students and gardens throughout the campus for students to pick from. These gardens form an important aspect of creating a 'living campus' as a means to engage staff and students on sustainable practice at a number of levels.

What courses are offered with a sustainability focus?

"It's not just about being green, it's as much about the people laying the asphalt on the road as the conservationists."

Otago polytechnic is the only institution in New Zealand to have taken on the challenge of providing sustainability as a component of all courses that they offer. It is still in the early stages of doing this, but the strategic thinking behind how to apply education for sustainability in a rigorous and effective way provides plenty of insights for other institutions. Here are a few of the background strategies:

- The core outcome that the Polytechnic is working toward is for each student to understand and be able to apply sustainable practice in their future workplace and at home.
- On each intake, a baseline study, which measures people's opinions about sustainability (using the 'new ecological paradigm') is done
- Depending on where people score, they may face quite different boundaries to genuinely engaging with sustainability practice. So the next question is to ask how to help people with particular barriers.
- In this way, the institution is consistently adapting itself to meet the learning needs of students, and to do that, it is important that sustainability is positively focused and communicated effectively.

- They usually find that people's opinions and understanding of sustainability can be categorised according to their discipline.
- Therefore what is required to teach students about sustainability in different disciplines is quite different.
- Audits of how sustainability is integrated in end of year projects are used as one indicator of success.

There are a range of other steps and processes that the Polytech is using, and one of their senior staff members, Sam Mann, has recently written a book which details these efforts (shortly to be released).

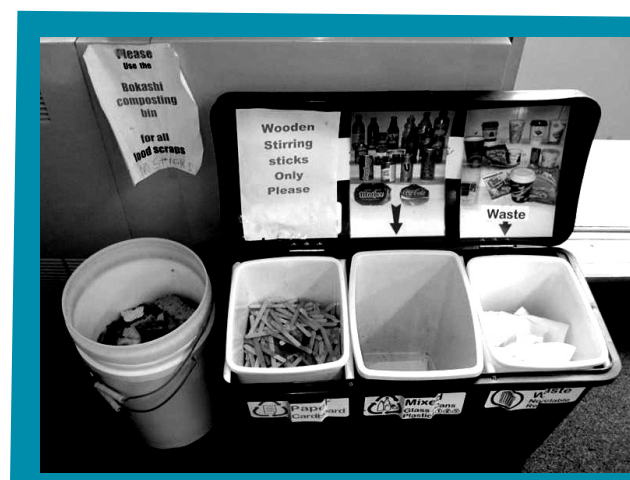
Eastern Institute of Technology (EIT)

What is EIT doing about sustainability?

The philosophy at EIT is to integrate sustainable campus management into business as usual 'calmly and without fanfare'. For example, all new buildings are being built to meet five-star Green building standards, while refurbishments must meet four-star standards. While the waste minimization strategy has meant that all organic waste is composted on-site, using large-scale *bokashi* bins. Facilities management staff spent time refining the *bokashi* composting system, which involves the following steps:

1. Food and organic waste is discarded into compost bins around campus, *bokashi* powder is added regularly to start fermentation/decomposition
2. Once full, the waste is left to ferment for a month or so in a 20-litre bucket, excess fluid that flows out is bottled and sold or used as liquid fertiliser
3. Then it is mixed into the first stage of the three large compost pile, where grass clippings etc are added, and it is moved along as it composts
4. Once compost is ready, it is either used on campus gardens or sold

Because Facilities Management has invested time into designing and sourcing their own system, they take the time to promote their system to students, staff and local schools. Education campaigns to ensure that the waste management system works well for staff and students have been reasonably successful, but engaging the student population remains the greatest challenge. As well as the composting, EIT has a full programme of recycling.



What courses are offered with a sustainability focus?

Sustainability is being integrated into courses in an ad hoc way at EIT, where it is taught as components in for example some of the business, viticulture and trades courses. However, there is no over-arching sustainability strategy that expresses how sustainability is to be integrated into curriculum, and there's no overview of courses that include sustainability as a component. Like most of the tertiary institutions, engaging students in active learning about sustainability remains the greatest challenge.

Southern Institute of Technology (SIT)

What is SIT doing about sustainability?

SIT does not have an environmental policy, and there's not a lot going on beyond a spot of recycling here and there.

What courses are offered with a sustainability focus?

SIT offers various qualifications in Environmental Management, from a diploma to a degree. It claims that it offers the most broad based environmental management degree in NZ, we weren't quite sure why though. SIT also offers a Business Masters programme - done on line in conjunction with the University of Wales. It offers a 'Business Incubator', which provides a general space that students can use to launch their business, including a desk, chair and phone line.

Christchurch Polytechnic Institute of Technology

What is CPIT doing about sustainability?

While there is no overt commitment to sustainability at CPIT, progress toward sustainable campus management has been made across a number of areas, and sustainability is integrated into courses across a range of disciplines. CPIT participates in the Enviromark award system, and recently received a bronze award for the whole campus, and the Facilities Management operations are aiming for the gold award. This has meant a focus on the standard range of operational measures toward sustainable campus management, such as waste and energy management. The sustainability advocate has also worked with the students' association to run awareness raising events, such as fairtrade fortnight and the Bikewise month (where they have done very well in the past).

What courses are offered with a sustainability focus?

The sustainability advocate works with staff to assist in the implementation of sustainability into their courses in an ongoing manner and as part of a 2-day staff professional development workshop. Thus sustainability has been integrated into diverse subject areas, such as

- Outdoor education and recreation studies
- Architecture
- Interior design
- Māori studies
- Midwifery

However, there are no focused course or career paths specialising in sustainability, although CPIT is investigating options for establishing a centre for education for sustainability, to further support the application of sustainability.

Unitec

What is Unitec doing about sustainability?

Unitec had a go at sustainability back in 1995, and then again in 2004, but neither of these amounted to anything of substance. A recent restructuring has meant that they're giving it another shot, and they reckon they're going to make it happen this time! They are in the process of identifying what their institutional response to sustainability will be, and translating that into a five-year strategy. This includes both operational and curriculum aspects of sustainability, which they hope to integrate into business as usual. So, can they translate talk into action? We'll have to wait and see!

What courses are offered with a sustainability focus?

Like most institutions, Unitec has various courses that relate to sustainability, such as:

- Not-for-profit management
- Architecture and landscape
- Community and social practice
- Natural Sciences (animal care, veterinary nurse etc)

Sustainability is also filtering into courses like Construction and Civil Engineering. A sustainability strategy will hopefully help to integrate this across the institution.

Te Wananga-o-Raukawa (TWR)

What is TWR doing about sustainability?

There is no formal environmental policy at TWR, although the guiding kaupapa are closely aligned with sustainability and do guide some decision-making. However, this is quite broad and open to interpretation.

What courses are offered with a sustainability focus?

The teaching and learning style at TWR differs considerably to that of a university. Learning is centered around noho marae, where students stay at the marae for an intensive period of coursework and then complete assignments at home (as well as weekly language classes). Study at TWR involves three key components: iwi and hapū studies, te reo Māori, and a specialist subject area (as well as some computer studies). According to the guide to study, this "means the learning journey involves self-discovery; learning about your whānau, hapū and iwi, learning your own Māori language; and learning about the wealth and range of knowledge within mātauranga Māori." In this way, teaching at TWR embodies many of the principles of education for sustainability. Like all three of the whare wānanga, courses are open to all New Zealanders, although for the iwi and hapū studies, students are required to have support from an iwi or hapū to undertake the coursework. Obviously for non-Māori this may be challenging.

The Studies in Environmental Management also embodies the principles of education for sustainability, where it 'exposes students to sustainable environmental activities from a te ao Māori worldview, which is a transdisciplinary experience'. Furthermore, the studies in accounting include learning about holistic measures of progress and sustainability, with a strong focus on how to measure cultural progress.

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