

MAGAZINE OF THE CENTRE FOR LEARNING AND RESEARCH IN HIGHER EDUCATION





This edition of academix presents a 'fine blend' of articles on innovative teaching, learning and research, along with details of the main programmes CLeaR will offer

during the year. Two new initiatives from 2014, ie, CLeaR Lights Leadership in Teaching and CLeaR Fellowships are building on initial success. The Teaching Catalyst has grown from a three-day introduction to a six-day course with practical outcomes for academics. Something else new is on the horizon too. Systematic evaluation and broad consultation are informing the selection of a new online learning management system (LMS) to be rolled out in 2016. An article on p3 acknowledges Cecil, the home grown LMS that served the University well for nearly 20 years (a grand age for an LMS!) and is ready to retire. To focus attention on the new LMS, 'Engaging with elearning' is the chosen theme for CLeaR initiatives in 2016. A call for nominations for CLeaR Fellowships will be announced shortly. For a mainly campus-based institution, technology is perhaps less critical to some aspects of academic practice than it is for universities with large numbers of distance learners. However, we anticipate great opportunities for rich content and engaging blended course designs once the affordances of a new generation LMS are available. CLeaR plans to make the most of these immediate and tangible options while disruptive technologies such as MOOCs promise a more connected and choice-rich future. Subscribe to CLeaR Alerts from our home page to stay informed of upcoming events.

Professor Helen Sword, Director of CLeaR, is on research and study leave until July 2015.

Cathy Gunn

Associate Professor and Acting Director Centre for Learning and Research in Higher Education (CLeaR)

editor: graphic desig photography: Liz Ramsay Tony Chung Alistair Kwan Liz Ramsay Tony Chung

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Updates on CLeaR programmes

CLeaR Fellows

This year's Fellows are working on highly diverse and innovative projects. CleaR is in the process of developing a website where each of the fellows has a page they can update with information about their project. There is a link to the fellows' pages on the CLeaR website www.clear.auckland.ac.nz/app/clear-fellows

Teaching Catalyst: Intro to Learning and Teaching at the University of Auckland

CLeaR recently launched the first Teaching Catalyst for 2015. This programme expands and replaces the three-day Introduction to University Teaching and Learning for new academics. Completion of the entire programme is a mandatory part of the continuation process for academics new to university teaching and is also recommended for academics new to the University of Auckland. Participants receive a certificate of completion.

The initial cohort of 25 new academics who recently completed Part One, University Teaching and Learning: An Intensive 3-Day Course will soon undertake Part Two, the three Documenting your Teaching workshops. By the end of these workshops, they'll have a teaching portfolio on which they've received feedback from each other and from the CLeaR facilitators. This will provide them with a document they can use for APRs, continuation and promotion.

Dr Sean Sturm, the programme coordinator, says "It gives us a chance to tie together the old 3-Day Intro with the work we were doing with new academics towards continuation and furthering their careers, so it should be an effective bridging programme. The key is that we can encourage them to follow up on some of the things they've learnt in Part One, rather than leaving them hanging. It connects up a few dots for new academics and gets them started in thinking about their teaching reflectively."

CLeaR Lights

This year's CleaR Lights Programme picks up on the University learning and teaching priority, *Student engagement and achievement*, which we have broken down into three streams.

For more information, see page 8.

Cover photo: Gothic Habit (created by Lynn Christiansen, USA.)

This wearable art garment at the WOW® World of Wearable Art™ exhibition at Auckland Museum reminded Dr Alistair Kwan (CLeaR) of the way he used to teach Euclidean constructions. He says, "We generally found Gothic traceries more interesting and down-to-earth than Heath's high-and-mighty translation of the Elements. Gothic architecture connected us to two traditions of mathematics: one was the stonemasons', whose methods survive somewhat in tracing floors, templates and occasional documents (notably the Milanese duomo archives recording a serious dispute over structural stability). The other tradition was that of the Scholastics. Both traditions were entangled, in their own ways, with religion and the Church. This felt-covered wood

garment places the wearer in the crossing where the masons' stone arcs often form a 'vesica piscis', widely understood as a symbol of the Virgin's womb. The wearer thus stands



where we often find the altar, collocating with unborn Christ, looking out to the empty darkness beyond the learned institution, darkness that the light above does nothing to fill. But, the building being a garment, its wearer never leaves it: as she advances into the unknown, learning goes with her, backed by a mathematical train of choristers and apsidal relics."

How will we benefit from the new LMS?

As part of its Learning and Teaching Technology Review, our University will get a new learning management system (LMS). We asked Professor Simon Holdaway, who sits on the review's steering committee, to share his experiences and expectations of a new LMS. Simon has a history of innovative teaching with technology and was a longstanding Chair of the Teaching and Learning Technology Committee.

I can remember before we had a formal LMS, when we were just starting to put material onto the open web. To do that, a lot of us were having to write html (hypertext mark-up language). Getting an LMS, our home-grown Cecil, was a huge leap forward because it made it a lot easier. We no longer had to create websites in a different language, and it let us change how we presented courses and the way we used our course content. We could add content online rather than just giving it out as photocopies and it let us do some really innovative things. Cecil was a great product for its time. It allowed us to develop more flexible ways of learning and to present a lot more varied and interesting material to the students.

I think we need to see the LMS as offering us tools that really benefit our work-life experience generally; as enabling us to enhance our teaching while giving us more freedom away from the desk. It's going to be really useful.

Although it was a great product, we were investing a lot to give it the flexibility that other commercial systems were developing. For quite a long period we were ahead of the game, but then we started to slip behind because of the size of the operation we needed to develop the system. Eventually commercial products diversified so much, we were unable to keep up. A new LMS will give us lots of new opportunities without imposing changes on how we teach — but it will also give us a great deal more flexibility to teach the way we want to.

With the rise of new opportunities for contact and interaction – not just around social media but also more broadly – we can contact our students more easily, and vice versa. A new LMS will give us more tools to leverage these advances. We can control contact. We don't have to be available 24/7 but we can be more flexible. I know that in my schedule I spend an awful lot of time travelling around, not just for conferences but also for field work. Having that flexibility will be extraordinarily useful for me. I think we need to see the LMS as offering us tools that really benefit our work-life experience generally, enabling us to enhance our teaching while giving us more freedom away from the desk. It's going to be really useful.

The new LMS options are different to the ones we've been using in many ways. They offer a much broader range of tools, including procedures like online marking. For example, some of us have been using Turnitin and a lot of this functionality is built into the new systems. If we like, we can still do things the way we have in the past, but we get new flexibility in being able to offer more informed interaction with students. We'll also be able to let them really look at their progress in new ways. I think that's going to be a significant change. People are going to be able to monitor their own progress and understand how well they've achieved learning goals. By this I mean more than just monitoring their marks. Marks are certainly part of it, but they will also be able to develop a better model of their understanding and realise what they've achieved. I think that's going to be another very useful function.



Professor Simon Holdaway, Anthropology

I really like the analytic capabilities of the new LMS systems. They let me monitor the progress of my students in ways that are really quite sophisticated. They're going to let us identify all levels of achievers, including the people who don't seem to be interacting as well as they should, those who get average grades but always attend and are really responsive in class and also the high achievers.

Another opportunity I see with a new LMS is to consider the places that we teach. We spend a lot of funds on bricks and mortar and I understand why. It's very important to develop the environment in which we interact with our students. But we interact in other environments too. I work in a field-based discipline and the ability to give people much more live experience of that field interaction is very important to me. At the moment we are investing quite heavily in online blogs and opportunities for our students to write while we're in the field. It's a significant part of their experience but we're constantly having to look at add-on products to enable them to have it. I think this LMS is going to help that a lot.

I think the new LMS is going to enable us to develop whole new ways of interacting with our students but potentially with other audiences too. For example, it will help us attract students if we can demonstrate how well Auckland does research, engaging students with it.

Project updates

If you'd like to keep up to date with developments, visit:

https://www.auckland.ac.nz/learningtech

Moving strategically to find the right blend

Blended learning can take various forms. The ambiguity with which it is defined in literature poses problems for educational design. However, exploring blended learning through a process like Carpe Diem takes people away from the temptation to just 'add technologies'.

The Carpe Diem's focus on intensive team-based course planning and design enables academics to rethink teaching while leveraging technologies. Attendees at the 2014 workshop, taken by Carpe Diem creator, Professor Gilly Salmon, reported finding particular value in articulating the aims of their project, creating a 'storyboard' (or structure) that aligns aims, activities and assessment, finding 'sparks' to motivate learning and, universally, the opportunity to share practice.

Recently, CLeaR's Elearning Group facilitated a Carpe Diem event with colleagues from the Academic Development Group. In classic 'practice what you preach' fashion, design teams explored options for integrating technology in CLeaR's flagship programmes like the Postgraduate Certificate in Academic Practice (PGCert) and the Doctoral Academic Careers Module. Traditionally, the PGCert has been a successful campus-based programme. The blended version comes as learners demand flexible options and the University moves towards a new LMS that



can perhaps open doors to opportunities unavailable before.

The impact of any technology integration depends on how it disrupts practice. For example, MOOCs have given rise to extensive debate in higher education. The hype would sometimes suggest that MOOCs epitomise good online education, but while there are exceptions – notably the cMOOCs – at this point MOOCs tend to most easily accommodate transmission pedagogy. In a similar vein, blended learning is not advantageous by default. Successful blended learning depends on more than just the type of technology used.

When considering blended learning, it is crucial to ask questions such as:

- What are the needs of our learners?
- How can blended learning support our teaching?
- What should we blend and how should we do it?

Elearning needs excellent timing, planning and clever strategies. Similarly to a game of chess (where you deploy your pieces on the board based on their functionality) in elearning you can use a selection of tools to develop a successful blend of face-to-face and online activities. You need to be able to adapt your strategies to your audience in the same way as you would respond to your chess opponent's moves.

All of the teams involved gained something from this pilot of the carpe diem process, even though we began with mixed opinions of its relevance. Benefits ranged from the opportunity to discuss the pedagogy of academic practice to making learning experiences more peer focused and interactive.

Just like the academics in CLeaR, teachers at the University have the chance to rethink their practice with respect to the opportunities that the new LMS will present.

Sophie Kennedy

Sophie recently joined CLeaR on a casual part-time basis as a learning designer and is currently providing support for staff in the CLeaR Fellowships Programme. She holds a PhD (Edith Cowan University) and a Master of Online Education from the University of Southern Queensland.

Sophie brings a wealth of experience in online learning. She previously held a number of positions at Edith Cowan University (ECU) in Perth, Australia. Most recently as Director of Online Studies at the Faculty of Business and Law and as Project Leader for a strategic online courses project in the Centre for Learning and Development at ECU.

As Learning Designer, she coordinated the migration from print to online learning environments in the Faculty of Business and Law in 2004-05. In 2006 she played a key role in introducing an Employability Skills Programme (Business Edge) in the Bachelor of Business, and taught first-year Business Edge units online in 2007

and 2008.

In 2009, Sophie developed an online delivery model for the Bachelor of Laws and facilitated the development and delivery of the LLB online, as well as the incorporation of the Learning and Teaching Academic Standards in the Bachelor of Laws.

In 2012 she received a Citation for

Outstanding Contributions to Learning and Teaching from the Australian Office for Learning and Teaching.

http://www.ecu.edu.au/faculties/business-and-law/staff/ profiles/school-of-law-and-justice/honorary-appointments/ dr-sophie-kennedy

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Data to Insight MOOC: Not your usual standard deviation

Late last year the University launched its first two FutureLearn MOOCs (Massive Open Online Course), *Data to Insight: an Introduction to Data Analysis* and *Academic Integrity: Values Skills, Action*. Both received excellent learner feedback and are scheduled to run again this year. CLeaR was part of the Data to Insight team and we bring you this report from an 'educator' perspective.

Professor Chris Wild, the creator and 'lead educator' on the Statistics MOOC, says, "Among the most gratifying comments left on the last page of the course was one that started, "Wow! Wow! Wow! ..." and another that ended with, "You've given me the best 3 weeks of my life." So it seems that statistics can be considerably more exciting than watching paint dry! Departing comments also showed high levels of appreciation for the course's (free) iNZight data-visualisation and analysis software. Enrolments came from all over the world, but were dominated by the UK and New Zealand. Course completers ranged from members of a small high-school physics-honours class to PhD researchers from many areas, and from journalists, linguists and arts administrators to economists, data managers, marketers and scientists. It was also pleasing to see quite a large contingent of NZ high-school mathematics and statistics teachers (one of the target groups)."

This was the first time Chris and fellow educator Tracey Meek had taught online and they found the shift more rewarding than they'd expected. They were also new to featuring on video and say they couldn't have done it without the expertise and supportive coaching of the University Media Production team and of CLeaR. Learners commented on the MOOC's production qualities: its 'beautiful visualisations' that "brought statistics to life in a way that 2D graphics just can't", on the way activities 'solidified' the concepts, leading to "seeing and understanding statistics in a refreshingly new way".

Chris and Tracey were the primary moderators on academic content. They say it gave them unprecedented and fascinating insights into their teaching. The immediacy of the comments could be so riveting they sometimes had difficulty refraining from dipping in for the next exciting instalment! However, the process took an enormous toll in time and energy and neither would do it in quite the same way again. Chris says that learners who commented engaged at a deeper level than he usually sees with his students. He puts much of this down to a mixture of having only students who were there because they wanted to learn, a greater level of personal confidence in mature (older) learners, and the presence of many professionals and researchers who

Some statistics

19,500 students enrolled (up from 13,000 at the start)
And from the post-course survey (likely mainly completers)
95% rated the overall experience very good (73%) or good (22%)
95% would subsequently pursue interest in the subject somehow
84% strongly liked the videos
85% rated the structure of course very clear

82% found the level of course about right



L-R Tracey Meek and Chris Wild (aka Meek & Wild) were transformed in the hands of Media Production (with assistance from Richard Smith – and photoshop for this image).

wanted to apply the ideas in their work The ones who really engaged were generally committed to the course and finished it. As is usual for a MOOC – as a spare-time pursuit – a relatively small proportion of those who started the course completed it (~10%).

Tom Elliott was the the main technology mentor for the course. As lead programmer for Chris Wild's *iNZight* software, which the students used for interactive exercises, his deep knowledge was invaluable. Several other staff members from the Department of Statistics also helped as content mentors. To support the moderating team and enhance the moderating tools available via the FutureLearn platform, we imported and analysed the daily feeds of student usage data every 24 hours. This allowed all significant issues to be addressed promptly, and ensured the most frequently asked student questions were answered as efficiently as possible.

When pressed as to what he would like to have known before he put his hand up to develop a MOOC, Chris says that, although he was a willing guinea pig, in retrospect it would have been helpful to know how much time it would take, not just to mentor the course, but to plan for learning in the MOOC environment and create the resources.

One thing about teaching online Chris will take to face-to-face teaching was the effectiveness of chunking learning, of doing things in small bites – see a little, do a little. He said, "It's what you did every day in school but it tends to get lost in the university environment."

The *Data to iNZight* MOOC introduced a new approach to teaching early-level statistics and it has sparked international interest in spreading the kind of expertise learners gained.

Who says you can't use MCQs effectively in the Humanities?

Multi-choice format seems an unlikely fit for History, but last year, Senior Tutors John Leckie and Dr Sara Buttsworth introduced peer assessment to their course, with students creating open-ended multichoice questions in Peerwise. It was so successful that it's now an integral part of the course.

John and Sara keep their eyes and ears open for opportunities to increase engagement in their classes, which form part of the Tertiary Foundation Certificate Programme. When they heard about Peerwise, they wondered whether engaging students in their own environment (online) might be more effective than the short quiz questions students had to answer in tutorials.

It proved a very rewarding experience for both students and staff. Students could either provide factual questions with a 'right' answer or create more thought-provoking, open-ended questions from which their peers chose the 'best' answer. That gave scope for stronger students to do really interesting things while weaker students could construct factual questions and get refreshers and reminders. It helped across the range of abilities and commitment. Some students had fun devising entertaining alternatives, adding welcome humour to the weekly exercise.

In Peerwise, students can rate each other's questions and provide feedback. Initially sceptical about the 'badges', John was won over by their popularity and effectiveness. Many students saw them as awards for quality. You can get badges for authoring (and for answering) a certain number of questions, for gaining a following, and for creating a question which consistently rates well. Student comments on which questions they found interesting (or uninteresting) not only spurred their peers to try harder but also provided useful insights for all.

John and Sara took advantage of Peerwise's ability to incorporate media, getting students to upload a cartoon and pose a related question that was pertinent to the week's topic. The students had no difficulty with this. Indeed, some students took the initiative in another week and uploaded their photos from a field trip to the museum as part of their question for that week.

The open-ended nature of questions was a catalyst for lively discussion. Sara has taught online before and found Peerwise discussions easier to monitor than discussion boards. She says she saw more targeted conversation because students are responding to an explanation and/or justifying their choice. One might say something like *"That's a great explanation but you didn't think about X"* and get the response *"I did but I thought Y was more important because ..."* and then they will go, *"Well could we not ...?"* Discussion was really brief and to the point so it was relatively quick for students and staff weren't spending hours reading through screeds of posts. There were no inappropriate comments, perhaps because John and Sara let the students know that, although posts are anonymous, they know who posts what.

Although they were working with Foundation students, both thought this targeted approach to discussion could be beneficial at all levels. It is particularly useful at Stage I to get students past thinking there's only one right answer, a belief many bring from school. Coming up with multiple answers that could be right challenges that assumption. The resulting database of questions



John Leckie and Sara Buttsworth stand alongside Haere (History) who continues to welcome people to the History Discipline in their new premises at Short Street.

and answers is also very useful for exam revision. Although both Sara and John admit that you can't avoid the fact that monitoring any online discussion is time-consuming, John pointed out that this makes you consciously assess its value and their experience so far is that in this context it was worth the time. It's just a matter of fitting it into their routines.

Last year, although student feedback was overwhelmingly positive, some students scrambled to complete the questions required to get the allocated marks. This year, to help students establish a weekly rhythm and routine, John and Sara are trialling a refinement to the process. In early face-to-face sessions, they will give students time to construct questions, discuss them with their neighbour and see how to make a post using their mobiles or the computer in the tutorial room. They will watch with interest to see whether encouraging the use of mobiles for this exercise spills over into unwanted mobile usage at other times.

The help of Dr Paul Denny, creator and administrator of Peerwise, was invaluable in developing this initiative. When his name was mentioned, Sara exclaimed, "Yes let's do a *Yay Paul* minute! He was fantastic. He came down to see us more than once, answered email right away and kept an eye on what we were doing because he was really interested in seeing how it worked in the context of the Humanities. He was fabulous!"

The experience was so positive that the Peerwise initiative is now fully integrated into the course. Students get 1% for each exercise (as long as they are also present at tutorials, which are a major component of the course).

The exercises have helped the students not only to think more, but to think more critically. Those who are committed to the course demonstrate a creativity and engagement which is appreciated by all the students. A common response was "Oh I hadn't thought about it in that way."



The possibilities offered by broadband and mobile devices can transform your course, and web-savvy students appreciate the flexibility that online learning offers, but how do you take advantage of this and still include relevant resources which pre-date today's technology?

This was the question that confronted Dr Nick Richards, course coordinator for EARTHSCI 105: Natural Hazards in New Zealand. Students on this large Stage I General Education course study the risks posed to people and property from floods, landslips, earthquakes, volcanoes and tsunamis.

Field trips are an important part of learning in a subject like this, but student numbers and the distances involved make them prohibitively expensive in staff time and financial cost. To overcome these difficulties, in 2005, staff in the forebears of the School of Environment, CLeaR and University Media Productions [see aCADemix, issue 1] developed a virtual field trip (VFT) to the Bay of Plenty, which had recently suffered a natural disaster. The VFT complemented other materials on the course and in 2014 it was still giving students a valuable authentic learning experience with interactive lab exercises related to case studies from the Bay of Plenty.

When the VFT was originally produced, CD was the only viable delivery option. Dialup modems were the norm and they couldn't handle streaming the 350 megabytes of video. But CD's are a cumbersome medium. Each year, staff in the School of Environment had to organise a CD for every student on the course. Students had to collect it from the Resource Centre and have it at hand when studying. The static nature of the medium also precluded alterations to assessments or seamless incorporation with other parts of the course.

Last year, Nick made plans to develop a course website that embedded course readings and information literacy skills. Now that broadband internet allows for streaming video, it was a natural progression to incorporate the virtual field trip. He approached Craig Housley and Liz Ramsay at CLeaR to investigate the possibility of repurposing the CD for the web. Liz and Craig were key members of the original development team so they were familiar with the VFT's pedagogical rationale and its design and development. They were heartened to hear that the resource was still relevant ten years later.

A rapid prototype of the website was created in CourseBuilder. This enables much more flexibility. Nick can easily edit the course content and make lecture materials available as the semester rolls by. During development, the topic structure was revisited and new sections on the Canterbury earthquakes and Auckland volcanoes were added to the VFT. Brígida Figueira at Student Learning Services collaborated with course lecturers to introduce Peermark (Turnitin peer review) activities to develop short answer skills. She also listed course readings and structured a section on writing and reading skills so students can be better prepared for the assessments.

Nick says, "The website created in CourseBuilder is an ideal platform for the course Natural Hazards in New Zealand. It enables the flexibility we require, as contributors to the course, and we can continually update the topic structure and content. We can include natural hazard events from around the world as they unfold, and any new information in relation to natural hazard research can easily be integrated into the course material. The website is as dynamic as Earth's natural hazards!"

In the fast-paced world of technology advances in teaching and learning, it will be interesting to see how the course is developed over the next ten years.



The transfer to CourseBuilder has enabled the presentation of video transcripts, not previously available on CD.

CLeaR LighTs: Leadership in Teaching Programme

The programme

CLeaR LighTs is a programme designed to help early-career academics and seasoned lecturers alike to assemble persuasive teaching portfolios, try out pedagogical initiatives and develop evidence of leadership in teaching ('LighTs' = Leadership in Teaching). The programme bridges the gap between the Teaching Catalyst: Intro to Learning and Teaching at the University of Auckland, which is compulsory for all academics new to teaching at the University of Auckland, and the Postgraduate Certificate in Academic Practice (the 'PG Cert'), which is a tertiary teaching qualification.

Each year, CLeaR LighTs will pick up on one of the University's learning and teaching priorities. For 2015, the chosen priority is *Student* engagement and achievement, which we have broken down into three themes:

- Engaging with academic literacies
- Engaging with Māori and Pasifika students
- Engaging with elearning

Each theme will involve CLeaR events of different types – seminars, short courses, even a mini-MOOC.

The process

Participants will meet with an academic colleague from CLeaR to put together a plan of action for the year from events and themes, and consult with them as necessary throughout the year. The plan will be tailored to the needs of the participants, which might be, say, to develop their repertoire and skills as supervisors, to design or redesign a course, to disseminate their teaching innovations, or to put together a teaching portfolio for continuation or promotion.

FAQs:

- How do I sign up? You fill out the expression of interest on the CLeaR website www.clear.auckland.ac.nz/ app/clear-lights
- What is the commitment? Aside from the initial consultation and end-of-year debrief, as little or as much as you can manage over the course of the year.
- How do I decide what to do? You meet with an academic colleague from CLeaR to put together an individual learning plan for the year.
- What do I get out of it? In addition to developing your teaching practice, you will receive guidance on how to document your leadership in teaching for a teaching portfolio or performance review.
- 5. Why is CLeaR doing this? Because we want to grow a network of leaders in learning and teaching to nurture a collegial culture of research-informed teaching across the University.

www.clear.auckland.ac.nz/app/ clear-lights

CLeaR LighTs: student engagement



Engaging with academic literacies

From academics across the faculties who teach at all degree levels, there is concern that students' writing and the other skills that make up academic literacy (reading, research, referencing, creative and critical thinking, and so on) are challenging to embed in our courses and to teach. On this theme, we'll look at how we might go about embedding and teaching writing at a range of levels and in "non-writing" disciplines.

Engaging Māori and Pasifika students

How can we better engage with Māori and Pasifika students to enhance their educational experiences and contribute to improved educational achievement and success? On the Māori and Pasifika theme will be a series of workshops and seminars that will open discussion on working with Māori and Pasifika students in different contexts, covering things such as strategies for student engagement, cross-cultural communication in supervision, and inclusive teaching.

Te Reo Māori is also a significant part of this theme. A number of te reo Māori workshops, designed to give participants a basic introduction to te reo Māori, will be offered.

Engaging with elearning

Possibilities abound for enhancing student learning and supporting your day-to-day teaching tasks with technology, from better organising course resources and incorporating rich media, through to helping students communicate, collaborate and think critically. But how do you get a sense of what those possibilities are and what might work for your own teaching? 'Engaging with elearning' provides a range of opportunities to see, hear and discuss how others have been making use of educational technologies, and to explore, plan and experiment with options that can benefit you and your students in your own context.

Watch CLeaR Alerts for details of dates and times for the CLeaR LighTs events. Sign up at www.clear.auckland.ac.nz/app/subscribe

Te reo Māori series for beginners

CLeaR is pleased to make available a series of interactive te reo Māori workshops throughout 2015. They are designed with absolute beginners in mind but are open to all staff at any proficiency level. The workshops aim to create a safe environment within which to learn te reo Māori; give all staff the opportunity to learn te reo Māori; increase confidence of staff to use te reo Māori in their work.



Dr Jen Martin Māori Academic Developer

my lecturers used even the tiniest amount of te reo Māori - it

Our Māori academic developer, Jen Martin, will deliver these workshops. Reflecting on her time as a student at the University, she had the following to say:

"Coming to the University as an undergraduate student fresh out of kura kaupapa Māori/ wharekura, where te reo Māori was the main language we used, I suddenly found myself in an environment that felt foreign to me. While I eventually found my feet, I always appreciated it when made me feel a little more at home here. In saying that, I know that many feel uncomfortable or scared to use te reo in case they get something wrong. I wanted to offer these workshops for all staff so they have the opportunity to learn the language in a non-threatening environment, have fun with it, and hopefully take something away at the end."

The workshops are proving very popular and filling fast. Enrol at: www.clear.auckland.ac.nz/app/workshops

For more information, or to enquire about other Māori-focussed professional development options (language or otherwise), please contact our Māori Academic Developer, Jen Martin: extension 87231 or j.martin@auckland.ac.nz.

Course/workshop	Sem 1	Sem 2	Content
Whakahuahua: Pronunciation 10.30 - 11.30 am	Thursday 19 March	Thursday 16 July	A key to learning any language is having the confidence to speak it. However, finding pronunciation difficult can often inhibit one's confidence. This workshop will take participants through a number of pronunciation strategies and exercises. We'll have you pronouncing words and phrases correctly in no time!
Mihimihi: Self introductions 12.00 - 1.30 pm	Thursday 19 March	Thursday 16 July	A key to learning any language is having the confidence to speak it. However, finding pronunciation difficult can often inhibit one's confidence. This workshop will take participants through a number of pronunciation strategies and exercises. We'll have you pronouncing words and phrases correctly in no time!
Kōrerorero: Basic conversation 12.00 - 1.30 pm	Thursday 30 April	Tuesday 10 September	In this workshop we'll learn some basic sentence structures that can be used to engage in everyday conversation. Participants will work together in small groups and engage in activities that foster simple te reo Māori conversation.
Reo ā-mahi: Language for the workplace/classroom 12.00 - 1.30 pm	Thursday 18 June	Tuesday 22 September	This workshop will focus on 'functional language' for the workplace or classroom. Participants will be introduced to a number of useful sentences and phrases that they can incorporate into their everyday work.
He timotimo: A Māori language taster 9.30 - 12.30	Friday 1 May	Friday 9 June	Can't see yourself making each te reo Māori session on offer? Only have time for one session? Get a taste of what will be covered in the other four te reo Māori sessions with this half day workshop. We will cover aspects of each of the other more targeted sessions on offer and focus on introducing participants to te reo Māori through a number of interactive activities and games that encourage spoken Māori right from the start!

CLeaR Learning and Teaching Symposium

The symposium was a great opportunity to focus on innovative teaching. For those couldn't make it, we provide a report on how to engage large classes from the two keynotes speakers, both winners of Tertiary Teaching Excellence Awards for sustained excellence.

Associate Professor Cather Simpson inspired the audience with an exposition of her teaching philosophy, and shared some of the guiding principles and practices for helping students achieve (and enjoy) large classes.

Her teaching philosophy is simple: she sees her role as a university educator as helping people learn what they need to reach their own goals, to achieve in their own lives. "When I succeed, students leave my office, the lecture hall, or the research lab equipped to take on their next challenge." she says.

She finds this philosophy particularly important in large lectures. Many large undergraduate science courses are filled with students earning professional degrees or majors in other disciplines. Students in these 'service' courses are clever and motivated – but most of them don't want to be scientists. Cather has grounded her teaching in these classes in core principles and practices formed from research in education and cognition, and from experience. "Of course," she says, "I also try to make classes fun and engaging. This is easy – science is intrinsically exciting!"

Doing this right has far-reaching consequences – in a typical year, Cather lectures to 1200 University of Auckland students or more. Over a 35-year career, that adds up to 1% of the New Zealand population! Cather's classroom may be the last time some of these students actively engage with physics or chemistry. Getting them past "OMG I hated physics and chemistry at Uni!" helps them make more informed decisions that could impact us all.

Active learning promotes understanding

Active learning means engaging students in the material. In courses with hundreds of students, active learning is more difficult to implement. Cather meets this challenge by getting the students to participate in demonstrations, whenever possible. For instance, she often asks the students to use their cell phones to time events in physical demonstrations (pendulum swings, motion with friction, etc). She collects a dozen or so data points verbally from the class, and analyses the results right then and there. It takes no more time than showing a prepared diagram and explaining pre-measured results, but is much, much more fun for the students "and me!" Cather laughs. She finds they remember and understand the principles better as well, so it's win-win.

Another example of Cather's active engagement comes in her first-year physics lecture on 'waves'. The 300+ students contrast stadium (transverse) and pressure (longitudinal) waves by performing them in the lecture theatre – they see immediately how the wave moves but they (the medium) stay in the same place. The most amazing part of this demo is that after it's over, the students are much more likely to volunteer to answer questions put to them, to talk animatedly to their classmates in 3 minute 'convince your neighbour' discussions, to make more eye contact with her and follow the lecture. Laughing together and getting out of their seats to participate in this brief demo makes them noticeably more engaged for the rest of the class.



"Science is intrinsically exciting." says Cather (shown here in the lab).

Collaborative projects offer pedagogical advantages

Student cooperation shows clear learning advantages over traditional classroom lecturing. Cooperative learning develops higher competence in reasoning and communication and reduces attrition rates at university, particularly from under-represented communities. It encourages respect for diversity, and breaks down stereotypes. Modern jobs value teamwork, so students who participate in group exercises get real-world experience too.

Cather's first experience using cooperative learning was in an innovative first-year chemistry course she developed early in her career in the USA. The results were very positive, and this powerful experience with collaborative learning has influenced her teaching ever since.

A recent example of how she incorporates collaborative learning into large classes here at the University of Auckland is with CHEM 310. In this large class, the students are mostly third-year, science students considering a career that involves science, in industry or academia. They are easy to convince of course relevance, but prefer doing science to attending lectures about it. The key for this group is maintaining engagement, while developing critical thinking skills and helping students master advanced concepts. Students should find satisfaction in stretching themselves to succeed.

Cather implemented a number of pedagogical innovations in this class to boost student engagement and performance. One important innovation grew out of conversations with her colleagues in Chemistry – professional academics learning collaboratively themselves! They transformed the laboratory experience from a formal, proscriptive, traditional experience into collaborative mini-research projects in academic staff laboratories in the School of Chemical Sciences. The assessment of these collaborative projects was novel as well – the students gave poster presentations, just like practising scientists at conferences. Staff and postgraduate students from the whole School of Chemical Sciences interviewed the CHEM 310 students at their posters, and assessed the quality of their presentation and understanding. Everyone was tremendously impressed with what these undergraduates achieved and the enthusiasm they conveyed in explaining what they had done.

Importantly, student performance in, and engagement with, the whole course improved with these innovations as well. Fewer students dropped the class, and the grade distribution adopted a much more healthy profile. The combination of more engaged students and greater student success that comes from the active learning and collaborative exercises makes teaching these large lecture classes very rewarding for Cather. "I'm at a university because I value teaching and learning," she says, "anything that helps the students learn with pleasure is worth it, because they leave university with a better understanding of science, and hopefully a and a positive view of its value."

Listening for understanding and the role post-it notes can play



Bryony closed with this thank you cartoon demonstrating her - probably inspirational talent as a cartoonist.

Associate-Professor Bryony James, Chemical and Materials Engineering, made many similar points, engaging audience participation to show the impact a welldesigned demonstration can have. Her point that varying modes of presentation increases opportunities for understanding was amply illustrated in her entertaining presentation.

One overarching theme that emerged at the symposium was the importance of

threshold concepts, which, once learned, change the way you think about something forever. Inspired by Glynis Cousins' writing on threshold concepts, Bryony tries to 'listen for understanding'. That's a big ask with a class of 500 students, but the humble post-it note provides a way. At the start of every lecture, Bryony issues the students with a small post-it note. Interestingly, big ones proved a disaster. She tells the students that if they're too shy to come and ask her a question, they can write it on the post-it note and leave it on the door as they leave. When she harvests them she gets an instant snapshot of what worked and what didn't.

Common themes emerge and in the next lecture Bryony displays selected notes on the document camera while she recaps the relevant point. The questions are also the basis for Frequently Asked Questions (posted on Cecil), which students then discuss on Piazza. Bryony assured us that it's not as taxing as it sounds. The same questions come up each year, so she just revises, polishes and 'tickles up' the list with any new questions.

Bryony says that when you're going through a threshold, you can get completely lost. Especially in the first year, students often think, "*It's just me. I'm stupid. I'll tough it out and pretend.*" The post-it notes show that they're not alone. It's OK not to get it immediately. There's a 'toleration of confusion'.

Post-it gallery

Bryony's post-it note gallery on Cecil is hugely popular with students and is a great way for them to help each other's understanding. When students can make jokes like this, it shows they've really got it!



Find out more at: https://akoaotearoa.ac.nz/download/ng/file/group-4/2013-ttea-excellence-booklet.pdf

Turning teaching initiatives into projects

It's a common lament from academics that it's challenging to talk about their teaching, in part because they see its 'outputs' as not as easily quantifiable as those of research, but also because they lack a straightforward tool to reflect on and document initiatives in their teaching practice. In CLeaR's Teaching Catalyst, we advise academics to think about their teaching on the 1-2-3 model of change:

- 1. What do you want to change in your teaching?
- 2. How are you going to change it?
- 3. How will you find out whether the change has been effective?

The Faculty of Engineering Teaching and Learning Committee has developed a simple two-page template along these lines to allow academics to reflect on and document their teaching initiatives. This was prompted by a concern, as Dr Keri Moyle (Engineering Science, Associate Dean - Students) puts it, "Many academics are disengaged from teaching because there is no metric for it and the effort that they put in is not well recognised." The Committee wanted a tool that would generate data to inform a teaching portfolio and improve students' learning (and that wouldn't be too burdensome). But, according to Keri, it would also allow academics to simply be "encouraged by their own progress" as teachers. In a pilot, Engineering academics were invited to use the template for their APR to highlight an issue in their teaching that they wanted to address in the coming year and to get the support of the departmental Head. This became their teaching project, which could be as formal or informal as they liked.

The teaching project template uses a simple two-step model to prompt reflection. It asks academics to think before the project about the motivations for their project, how it will influence learning outcomes and how they will measure its results. It asks them to think afterward about the results of the project, what they learnt from it and, importantly, how they will share it, as well as allowing them to think about how they might contextualise their project in the scholarship of teaching, with other projects, and so on.

Engineering plans to encourage those who have developed teaching projects to share their experiences and, once there are sufficient numbers, it plans to organise regular forums where academics can share their teaching initiatives and reflections on the with colleagues, on the principle that academics learn best from their peers (Warhurst 2006†).

* The reflective prompts have been slightly edited.

+ Warhurst, R. P. (2006). "We really felt part of something": Participatory learning among peers within a university teachingdevelopment community of practice. *International Journal for Academic Development, 11*(2), 111-122.

			LOOKING BACK	
ENGINEERING TEACHING: Projects for teaching portfolios		Evidence: What are the results of your measures		
Name: Target course:		of success?		
	BEFORE YOU BEGIN			
Briefly describe your teaching project				
		Reflection: Qualitative commentary on the measures of success?		
What has motivated this project?		Discomingtion: How will		
		you tell other people about this? Who else is this most relevant to?		
How will your project affect learning outcomes and/or graduate attributes?				
How will you measure the success of your project?		Is there other information (other projects, published research, etc) that is relevant to your results?		

TERNZ Conference - a different model

In November 2014, CLeaR hosted the TERNZ (Tertiary Education Research in New Zealand) Conference for academics from all disciplines. The theme is *Learning in higher education: our learning, our students' learning, our colleagues' learning.*

TERNZ is unusual for an academic conference in that it prioritises conversation about teaching and learning, enabling us to learn from each other's experience. Organisers believe that — like our students — academics learn most effectively in an interactive setting where our experiences are valued. In particular, the model provides a medium for early-career academics to present their work and receive feedback in a collegial environment.

In this model, each presenter has 45 minutes: 10 to present their research on their teaching and learning and 35 for an activity encouraging collegial feedback. Nobody presents papers and 'experts' do not lead the thinking. Instead, ideas develop through conversations where all participants can play an equal part.

'Host groups' also play an important role in this model. Organisers establish groups of participants and appoint a leader. The groups meet regularly throughout the conference to extend conversations begun in presentations. As a result, the conference builds networks of teachers who value their teaching as a field for

Magnetic blueprints

Dr Alistair Kwan (CleaR) writes: "Physics students have been producing magnetic field images for a long, long time. Today, we mostly ask them to plot the field point-by-point around a magnet by sliding a tiny compass across the paper, making little dots to join up as they go. This process is conceptually simple but it requires a bit of skill, and it helps if you know what to expect.

Around the end of the 19th century, there were livelier ways to capture magnetic field images. You may recognise the pattern from photographs of iron filings around magnets: that's exactly what it is. The filings have been thinly scattered, the paper tapped until they settled into an acceptable pattern, and then the whole arrangement imaged directly onto the paper below. The image is called a 'cyanotype', using paper photosensitised with a coating of two cheap chemicals. The cyanotype process was initially developed by John Herschel (1792–1871), who championed its potential as a technology for copying handwritten texts. It never took off as that, but did, from the late nineteenth century, find a large market for copying drawings, so massproduced blueprint paper became cheap and widely available.

This image is from the laboratory notes of Clara Weiss, made in 1915 or 1916. The iron filings, perhaps held secure by a sheet of glass, masked the blueprint paper during exposure. The paper could have been exposed by electric light, but period laboratory manuals tell the student to take their work out into the sun. Blueprinting gave Weiss the benefit of seeing the whole magnetic field, and seeing how those thousands of iron fragments respond immediately to any shift of the magnet. She likely got to spend a bit of class time out in the sun, assessing for herself when the paper had been exposed the right amount of time – a direct engagement with data quality."



'Host groups' are another important part TERNZ conferences.

research, form collaborations, and gather new ideas for research.

Although there is usually a cap of 60-70, last year we attracted about 140 participants, demonstrating that New Zealand academics want to learn what others are doing and share their ideas and innovations in a research environment. It was a challenge organising more host groups within a limited space, but we managed. The result was an overwhelmingly positive response, especially from the many early-career academics attending their first conference.



Clara Weiss's magnetic field cyanotype 1915 or 1916.

Ako Aotearoa national funding

In 2014, CLeaR won two Ako Aotearoa grants for national projects. These were the only grants available in the General category. We explain the nature and purpose of the projects.

Making the Invisible Visible: Illuminating Undergraduate Learning Outcomes Beyond Content and Skills

Our project is based on the notion that education is more than just content and skills acquisition. It enhances each student's approach to learning, self-efficacy, professional readiness and disciplinary awareness. But this learning is invisible on academic transcripts – and to employers and students themselves. Our project will identify these educational learning outcomes and develop tools to observe, analyse and report them, enabling staff to review their learning outcomes to incorporate them.

The Learning Outcomes Framework we are developing will extend across English (Arts), Psychology and Chemistry (Science), Dance and Theatre (Creative Arts), and Law (Professional). The model will be used to identify effective university teaching, evaluate innovative course delivery, and enable quality teaching practice to be compared within and across disciplines. It will be relevant to all disciplines in tertiary education, facilitating the practical evaluation of curricula, courses and teaching, and making visible much student learning that is currently invisible.

The team

The University of Auckland:

Barbara Kensington-Miller	CLeaR (lead Principal Investigator		
Alys Longley	Dance (co-PI)		
Sean Sturm	CLeaR		
Andrea Mead	Psychology		
Alison Cleland	Law		
Tom Cairns	Research assistant		

Victoria University of Wellington: Amanda Gilbert CAD (co-p Bernadette Knewstubb CAD

CAD (co-project leader)

Building an evidence-base for teaching and learning design using learning analytics data

This research aims to make learning analytics data accessible to the non-technical academic. Learning analytics uses large, anonymous sets of system data as objective feedback on student interactions with online learning activities. Teachers can design more effective and timely learning tasks if they understand how students use them. Although such data is routinely collected, extracting useful information requires a level of data literacy many of us currently lack. Our project aims to develop ways to translate learning analytics data into useful information for tertiary teachers and learning designers.

We will develop a taxonomy representing the range of analytics data collected by common elearning systems, explore ways to extract meaning from these data, and the permissions or restrictions that may apply to their use. We will then use a series of case studies to explore how teachers interpret learning analytics data as feedback, and apply the insights gained to develop or modify learning designs.

The team

The University of Auckland: Cathy Gunn CLeaR (Principal Investigator) Claire Donald CLeaR

University of Otago

Jenny McDonald Higher Education Development Centre (Co- Principal Investigator)

Massey UniversityJohn MilneNational Centre for Teaching and LearningOpen Polytechnic of New ZealandMark NicholsEducation Design Services

Reflections on learning and teaching

Curating a collection of reflective teaching cases is one strategy the first cohort of CLeaR Fellows used to support the Programme's aim to grow and disseminate internationally significant teaching and learning developments. The cases 'open the classroom door' so others can observe and learn from what is happening inside. As well as telling their own stories on the theme Rethinking the classroom: Interactive teaching and learning, the fellows identified colleagues with experience to share. So while only seven fellows were appointed in the first year, the collection includes more than twice that many cases. There was much debate within the group about what defines 'a classroom' and 'interactivity'. Rather than repeating that rich discussion here, we let the cases speak for themselves, and invite you to reflect on what the terms mean in your own professional practice context at the present time. The Māori subtitle, He kohinga whakaaro mo te ako, acknowleges that these reflections

on teaching and learning include contributions from many different authors.

Request a print copy from clear@ auckland.ac.nz (while stocks last) or read the collection online at www.clear.auckland.ac.nz/app/ clear-fellows

Gunn, C., Cairns, T., Ramsay, E. (Eds.). (2015). *Reflections on rethinking the classroom: Interactive teaching and learning He kohinga whakaaro mō te ako.* Auckland, New Zealand: CLeaR, The University of Auckland. Reflections on rethinking the classroo Interactive teaching and learning He kohinga whakaaro mō te ako



Doctoral supervision experience on campus

In 2014, while putting together a series of seminars to support good supervision, Susan Carter wanted to know more about doctoral supervision experience at our University. She was especially interested in the generic issues that could be covered in CLeaR seminars such as communication, project management and management of writing. She also wanted to know whether there were conspicuous differences in experience as a result of discipline difference, in which case seminars might be tailored to fit and then tagged for specific needs, e.g., STEM and non-STEM.

Susan built a questionnaire in CourseBuilder, got Ethics Committee approval so that anything interesting could be included in future publications, and attracted responses from 226 of the 1237 accredited doctoral supervisors at the University of Auckland. CourseBuilder anonymises responses, but enables individual submissions to be viewed as one. To capture discipline differences, participants were asked to identify their Faculty, School or Research Institute. It's an overly sweeping approach to methodological difference, and Susan has begun interviewing experienced supervisors from different disciplines to get a more accurate understanding. However the initial broad brush approach suggests there is not a significant indication of discipline difference.

Writing, communication and research design

The Likert scale questions showed that the Faculties of Medical and Health Sciences (FMHS) (2.94), Engineering (3.00), Science (2.85) and Business and Economics (FBE) (2.90) find it slightly more difficult than average (2.75) to get doctoral students writing throughout the process. (Two people from Science insisted firmly that writing was of very little significance – what really mattered was the research itself.) However, fostering good quality writing (average 3.29) that was simple, clear, and succinct (average 3.31) was a tougher task.

FMHS (2.59) and Arts (2.50) had slightly more difficulty with supervisory communication than average (2.33). FBE (2.811) and FMHS (2.85) supervisors reported a marginally bigger challenge supporting the design of the research project (average 2.65).

The project has been boosted with the input of Summer Research Scholar, Priyanka Nair. Priyanka is a psychology student and a graduate of Research Methods in Psychology, PSYCH 306. She has been working with Susan on analysis, has become fully engaged, and the two have plans to publish together on the data's emotions and identity theme. A huge amount of rich questionnaire data offers recurrent themes.

Data indicates that supervision is hard work. Word searches of the questionnaire responses showed different aspects of supervision are perceived as 'challenging' (124 mentions), 'difficult' (82), 'hard' (56), 'frustrating' (19), 'exhausting' (5), 'worrying' (4), and felt like 'drudgery' (4). Most significantly, supervision seems to take too much 'time' (221), with different aspects of supervision identified as 'time-consuming' (20).

It was frequently mentioned that students often don't take advice, so that *"it did sometimes feel like Groundhog Day"*. Supervisors also mentioned (less often) frustration that students didn't challenge advice. Whether students ought to follow advice or challenge it depends on what the advice is about. One



L-R Susan Carter with Summer Research Scholar, Priyanka Nair.

participant summed up "I have no problem with a student's DECIDING not to follow advice and providing a reason – that's great. Most often, though, students ignore advice – and other academics note this too – because they do not understand it, find it too hard or are in non-productive mode."

Several people felt that supervisory work is under-rewarded, under-appreciated by the academic system and exacerbated by the amount of bureaucracy involved with rigorously-enforced time constraint. While Susan is aware that the bureaucracy and time-limit protects doctoral students (a valuable and relatively vulnerable strata of the University), these supervisors felt it was at their expense.

Most questions sought what was difficult – of use to seminar design decisions – but many supervisors contributed that supervision was 'enjoyable' (16 mentions), 'satisfying' (11), 'pleasurable' (7) and a 'joy' (5) in and of itself. *"It's one-to-one teaching, which is the most satisfying form of pedagogy I know...I really like the intellectual spark."*

Comments also signalled the sensitivity, diplomacy and selfawareness of some University of Auckland supervisors. "The issue is balancing straight-talking against being tactful and supportive"; there is "tension between giving honest feedback and not wanting to be too discouraging". Care is needed because "sometimes you need to say something isn't working at exactly the point when the student least wants to hear it". Paying heed to particular pressure points in the doctoral process matters, for example, "The final stage is a very delicate time – students are highly vulnerable at this stage so it is important to tread carefully". Reflection included, "The emotional component of supervision needs attention. Students are not brains on a stick but whole people who often go through a lot of emotional even traumatic situations while doing doctorates. I just check in on how they are as a 'whole' person."

2015 CLeaR programmes and events

Programmes

- CLeaR Fellowship programme (pages 2 & 14)
- Doctoral Academic Career Module
- Postgraduate Certificate in Academic Practice

- Teaching Catalyst (page 2)
- CLeaR Lights (page 8)

CLeaR events

This list is accurate at the date of publication. Events are available to all staff, not just those on CLeaR programmes.

Title	Coordinator
Engaging with Māori and Pasifika students	
Cross cultural communication in supervision	'Ema Wolfgramm-Foliaki
Cultural literacy	Jen Martin, 'Ema Wolfgramm-Foliaki
Introduction to te reo Māori series (See page 9)	Jen Martin
Learning models/concepts	Jen Martin, 'Ema Wolfgramm-Foliaki
Strategies for student engagement	Jen Martin, 'Ema Wolfgramm-Foliaki
Engaging with elearning	
Blended learning online: Symposia (2) a panel discussion leading to interest groups	Claire Donald
Leveraging technology for skills development	Ashwini Datt
Mini-mooc: engaging in digital teaching and learning	Ashwini Datt
Tailored workshops by request	Elearning Group
Using social technologies in teaching	Ashwini Datt
Engaging with academic literacies	
Engaging research students with academic lieracy: micro-level writing feedback	Susan Carter
Engaging STEM undergraduates with academic writing	Sean Sturm
Lab reports as a process for learning through writing	Alistair Kwan
Other events, short courses and workshops	
CLeaR Learning and Teaching Symposium (October)	CLeaR
Course (re)design for active learning	Claire Donald, Pauline Cooper-Loelu
Course (re)design for flexible learning	Claire Donald, Pauline Cooper-Loelu
Inclusive teaching	'Ema Wolfgramm-Foliaki
Introduction to tutoring (February and July)	'Ema Wolfgramm-Foliaki
Masters supervision	Susan Carter
Orientation to doctoral education policy and process at UoA	Caroline Daly
Rethinking assessment 1 day intensive	Adam Blake & Sean Sturm
Supervision series (includes The art of graduate supervision)	Susan Carter
Supervision troubleshooting: Ask your auntie	Susan Carter

Please consider our waistlines

Leftover cake and chocolate biscuits wreak havoc with our waistlines! If you can't make it to an event, please let us know. Low turnout on your part and high cholesterol on ours may result in them being disccontinued. More importantly, there is often a waiting list and it's frustrating to find there was space after all!

Enrol

www.clear.auckland.ac.nz/app/workshops

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