# t news

## FOR THOSE WITH A PASSION FOR TECHNOLOGY EDUCATION

### ISSUE 58 SEPTEMBER 2012

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# t news

## THE NEWSLETTER FOR THOSE WITH A PASSION FOR TECHNOLOGY EDUCATION

### ISSUE 58 SEPTEMBER 2012

*t-news is published eight times a year and provides up-to-date information for Technology teachers, celebrates success, acknowledges achievement and promotes available resources and upcoming events.*

*Published and distributed by IPENZ to over 1,000 members of Technology-related teacher associations,* t-news *is widely read by primary and secondary teachers.*

*For editorial enquiries and contributions, please contact Glynn McGregor GMcGregor@techlink.org.nz.*

*For subscription and advertising enquiries, please email schools@ipenz.org.nz.*

*Earlier issues of* t-news *are archived at: www.tenz.org.nz/t-news.*

*The opinions expressed in this magazine are not necessarily those of the individual TESAC associations nor of IPENZ.*

## Welcome to the September 2012 issue of **t-news**

**t-news** is published in association with the Technology Education Subject Associations Coalition (TESAC), the collaboration between the four major subject associations supporting Technology education in New Zealand – HETTANZ, NZACDITT, NZGTTA and TENZ.

*Publishing dates for the remainder of 2012: 5 November; 10 December.*

Association updates can be found on the following pages:

*t-news is produced and distributed in association with:*

# New book promotes 'connective ventures'

What do you do if you keep looking for a particular kind of book but never seem to be able to find it? Well, if you're Associate Professor Bev France you put one together yourself. That book, *Bringing Communities Together,* co-authored with fellow Auckland University staff member and good personal friend, Dr Vicki Compton, was launched in August at a function hosted by the University's Faculty of Education.

The book focuses on 'science and technology connective ventures' – an area in which both Bev and Vicki have considerable experience. Right from the outset they pose the question 'Bringing communities together – why bother?' and admit that one of the key drivers for the book was a desire to confidently answer that sort of basic question.

"To do this, we felt we would need to explore the concept of educational connections and to explain, illustrate, and justify connections between the education sector and the science and technology communities," they said. "We also wanted contributions from people who had been involved in successful initiatives so that real-life experience would be a strong part of the book as well."

In launching the book, Professor Alister Jones, University of Waikato Deputy Vice-Chancellor, commented on its timely nature given the current international and New Zealand Government interest in STEM education. "Over the last 20 years there has been a lot of rhetoric about connecting communities but very little in the way of research and practice-based evidence – this book fills a number of gaps in the rhetoric-practice chasm," he said. "There is a diversity of communities represented in the book, including scientific, business, engineering and vocational education – and this is a real strength."

In deciding on the structure of the book Bev and Vicki saw the need for a theoretical framework at the beginning and "pulling something together in terms of principles" at the end. However, they were keen that the bulk of the book would be about examples of actual interventions – from both technology and science.

"It was important to us that the contributors were part of the initiative themselves – so it was their inside story, if you like. We were keen that people could say what they had done and then provide some evidence that would show the impact of what they were doing – that was quite key for us."

"It was an opportunity for people to talk about their initiatives in a bit of a different way and provide evaluative evidence for them. And it was an opportunity for our theoretical framework writers to focus on the concept of connections and what can happen – What are the possibilities? What are the dangers?"

"We tried to work with our co ntributors in a very interactive way, that would allow them to feel that they had a level of ownership – not just of what they wrote, but of the book as a whole."

In the final chapter, Vicki and Bev draw from earlier chapters to identify the key principles of worthwhile, effective and efficient connective initiatives. "Each principle is accompanied by a set of questions that we believe reflects the issues raised and successes illustrated throughout previous chapters. We hope these principles and questions will be of use to people interested in developing, funding and/or participating in future connective initiatives in the fields of technology and science."

Alister said: "This book contributes to an informed debate and is both practice- and research-based. It sets out a number of relevant issues and challenges and highlights the expanding notion of communities in relation to science and technology."

He also noted that the book will prove useful to many groups including scientists, technologists, teacher educators, teachers and policy-makers. He said that it's different to many edited books



*Dr Vicki Compton (left) & Associate Professor Bev France with Professor Alister Jones*

in that it brings to bear, in a coherent way, key issues for thinking about connecting learners with scientists and technologists.

"It considers the many ways in which communities can be connected, from traditional face-to-face to blended and through to fully on-line," he said. "It provides helpful guidance for the development of programmes, highlights resources and effective practice, and will help move the field further in its thinking and practice."

The book can be ordered at https://www.sensepublishers.com/index.php?osCsid=22d27cc5432oc8ocef8a68bc7b68e2o2&cPath=73

# Technology education – vocational or academic?

I believe the growth of Technology education as an area of study within general education is one of the most significant curriculum developments of recent years. Throughout the world, numerous countries have developed ways of offering Technology education within mainstream education.

That said, Technology education can be seen as both an old and a new subject, a juxtaposition has never been truly acknowledged. As an old subject it is associated with knowledge and intentions of developing craft expertise and vocational/job preparation. As a new subject there is greater emphasis placed on Technology as knowledge which invigorates a general academic subject to develop a learner's understanding in a critical social context.

This duality of old and new has been described by some as the curse of Technology education. The distinction between differing types of knowing and their importance is not new – the ancient Greeks separated this knowing by social class. Craftsman possessed practical knowledge which lacked prestige and authority and placed them just above the slave in social rank. The aim of Technology education in some curricula is to develop programmes that will support the development of a critical technological literacy in students, which will serve them well as future informed and empowered citizens. This critical technological literacy is seen as more important and much broader than just functional
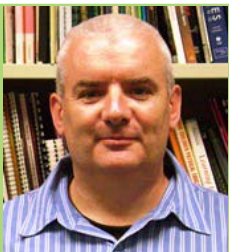
literacy. All of these differing viewpoints have led to confusion and finger pointing within the Technology teaching profession. These viewpoints can be seen in two main camps: Technology education as vocational and Technology education as academic.

I suggest that both of these viewpoints are red herrings, and unless challenged they could see the demise of Technology education as a compulsory part of general education. There is no absolute distinction between vocational and general (or academic) learning. Good vocational provision develops skills, knowledge and attributes that are desirable in adult life generally, and not only in the workplace; conversely, much of what is learnt in general or academic learning is relevant to employment.

During an all too familiar period of rising unemployment and a major decline of the economy, the concern is raised that education is failing to meet the needs of society. This perceived failure gives rise to a significant change in emphasis for education which is called 'new vocationalism'. The term new vocationalism refers to a particular political ideological shift from education being a means of reducing inequality to a functional perspective. This functional perspective is delivered through education meeting the needs of the economy particularly industry and business.

These debates are framed by wider societal issues and changes – currently in New Zealand there are high levels of disaffection and unemployment, particularly of young people. Politicians charged with education and employment strategies are beginning to focus their lens clearly on the 14-19 age sector. What we have now is a Technology education charged with developing technological literacy.

What is meant by a broad technological literacy? The inclusion to a greater extent of the history, philosophy and sociology of Technology is a major swing away from the previous craft and vocational aspects of the subject. The expectation to critique their practice and that of others through the ages is a significant undertaking. Some argue this makes the subject too academic; others would say this defines the subject in a modern era.

Firstly, how can Technology teachers be expected to tackle critiquing issues that few other subject teachers could handle. Secondly, this is a significant shift from their previous focus of developing practical expertise. Thirdly, despite all the policy debate in Technology education there is little research on how teachers, outside of a select few, have coped with the proposed changes.

Is there a difference between historical craft and Technology education or is one simply the evolution of the other? No doubt curriculum reform was and is necessary. The question is, by reducing some of the historical craft and technical aspects of the preceding curriculum offerings, are we in danger of losing the subject's practical vocational essence? Teachers have a limited timetable allowance to develop their subject's core constructs and more time spent on philosophical and social issues has to be taken from what were previously considered important characteristics of the subject.

It could be argued that aspiring for technological expertise within a school subject is unrealistic and unobtainable. However, few would argue that a foundation for that expertise should be established by the learning area in schools. The question then becomes; what does this foundation consist of and how do students acquire it?

Please email feedback on this topic to g.c.osullivan@massey.ac.nz



*Gary O'Sullivan is a senior lecturer in the School of Curriculum and Pedagogy at Massey University College of Education in Palmerston North. He lectures in the area of Technology education. Prior to taking up his current position at Massey, he was a secondary school deputy principal in the UK having taught Technology and ICT education.*

It seems that there is never a quiet moment in contemporary education. The daily pressures in the classroom and school at large have become endless, and many will now be busy with mid-year examination/assessment marking and report writing while at the same time working with the aligned Level 2 standards and wondering about coping strategies for 2013 and Level 3.

The Ministry of Education, in various ways, is also busy. It could be argued that they are determinedly focused on causing teachers angst. The student-to-teacher ratio announcement and all its implications caused an uproar, then lost momentum and was quietly shelved. However, one must wonder if this was a final decision or an interim one. Nevertheless, it did allow for teachers to focus their energies back on teaching and learning in the Technology classrooms of Aotearoa.

But there was no time for complacency, as then came the announcement that the Ministry funding/structure of Techlink will change in December and the contract with IPENZ will finish. This was another decision causing concern and one which demands urgent advocacy from all teachers of Technology in conjunction with the Technology subject associations. While the wider community provided strong and effective advocacy against the teacher-student ratio, this announcement calls for a loud and collective voice from all teachers. There is no doubt that Techlink is an invaluable tool for teachers and those in pre-service. This was affirmed in discussion at the Technology hui in May. Techlink is also a portal for students, parents and the wider community.

At a time when there is a national focus on raising student achievement and the roll out of a Professional Learning and Development model focused on lifting student achievement, it seems contradictory to weaken Techlink. By 2017 it is expected that 85% of school leavers will have Level 2 NCEA. The Minister of Education is constantly arguing the need for quality teachers – quality achieved through the support such as has been provided via Techlink. To lessen the support that Techlink affords 21st century teachers simply does not make sense.

Again, we as educators are forced to advocate, this time for what teachers 'at the chalk face' know is an essential tool if there is to be quality teaching and raised student achievement.

Where is the logic and common sense in all of this? It is the beginning of September and there remain four more months in which the Ministry of Education might make yet more announcements – let us just hope that they are of the enhancing/empowering type!

Meantime, all of us have a responsibility to our students and our profession to advocate firmly and clearly to the Ministry of Education that the Techlink model that we have is the one that is wanted and needed in this 21st century of education in Aotearoa New Zealand.

**Adrienne Reeves –** *President HETTANZ*

## TESAC CONFERENCE 2013 – 1-3 October, 2013, Wellington

The theme of the TESAC Conference will be **'Teachers telling stories with take-home value'**, and in these initial stages of planning there are plenty of stories to tell.

The conference committee is mindful that the conference will provide rich and powerful learning opportunities and experiences for all delegates, and so the mantra is quickly becoming reflection for enhancement – change is okay.

Late in 2011, the Teacher Refresher Course Committee (TRCC) was approached to be involved in running the conference. However, the initial response was that the conference was too large for the model within which they operate. As a forward-thinking future-focused group, TESAC decided to be proactive and submitted an application anyway, on the basis that subject associations working together for professional development and learning is the way forward in this decade.

Perseverance won and in August TRCC replied that they **"would like to accept your proposal and offer this course in October, 2013 with a cap of approximately 300 attendees (with the first 100 paid registrations receiving the TRCC travel subsidy)"**.

This is indeed good news for the organising committee and for all conference delegates. Those who have had key roles in organising conferences will know that the time, energy and extra commitment required is huge; to have a conference organising body involved will benefit all.

TRCC has a long history in running conferences and, as convenor, I am looking forward to working with them. Initial conversations with TRCC Executive Officer Laura Collins have been exciting and positive. TRCC is based in Wellington and Laura's knowledge of the city will be invaluable in the decision-making processes.

**Registration Costs**

The first meeting with TRCC is set for the October holidays and so final costs for the conference are not yet set. Many schools will soon be preparing their 2013 budgets and it is intended that the registration fee will be kept in the range of $350-450. Travel (if you are not one of the first 100 delegates registered) and accommodation will be additional to this.

**Share your ideas for the Conference**

If you have ideas for this conference please contact me, Adrienne Reeves, president@hettanz.org.nz or someone in your subject association. For example, there has been feedback from a delegate at the International Design Research Conference in Bangkok, where discussion forums followed on from presentations, enabling debate and reflection.

# HETTANZ Update

The HETTANZ executive has been busy working on the Association's strategic plan. The three underpinning goals are **advocacy, communication** and **professional learning**. This year has shown that clear direction and measurable indicators are central to effectiveness when representing a large body of teachers, especially when faced with a Government and Ministry intent on making alarming educational announcements.

HETTANZ membership now totals over 600 – Year 7-13 teachers from across all educational sectors and an increasing number of industry members.

The executive of HETTANZ comprises nine members; three joined in May and I took up the role of president in November of 2011.

Alongside the strategic plan sits a **policy, procedures** and **practices** document. These two documents have enabled a seamless transition for me as president and for the three recently-elected regional representatives. But more importantly, these documents have highlighted the importance of systems and processes for all organisations and particularly those where the time given is voluntary and when the 'work' happens well outside of school hours.

It was my first time attending the annual PPTA subject forum and the two days were worthwhile. To learn of the operations of other subject associations was empowering, as was sharing of procedures and practices.

As a result, HETTANZ has been able to update and develop the job descriptions for the executive members, providing yet another system for effectiveness as an organisation. The Education Review Office has a strong focus on self review. The executive of HETTANZ has done a lot of self review in the last few months and members have been challenged to do the same in their departments/learning areas within their own schools.

## Surveying membership

After writing to the Minister of Education to express HETTANZ's concern over the proposed teacher-to-student ratio change it became clear that accurate data based evidence is important. It might be argued that data and education are now synonymous terms in contemporary education.

In response to this HETTANZ is currently surveying members to gather data. The executive realised that there is need to have accurate data on levels taught, department/learning area names, age of teachers, sectors taught in and much more. A 92% return rate is being sought which will give the findings credibility.

## On the resource front

*Home Sewn*

This very recently released book is exciting, fun, contemporary, useable and showcases ten leading New Zealand designers.



The Illustrations are inspiring and patterns for the garments are included as well as tips on 'how to measure' and illustrated instructions on how to execute some of the techniques. Imagine researching and making this dress!

HETTANZ has sourced the books and are selling them at a **special price** of $35 + P & P.

Contact secretary@hettanz.org.nz

## HETTANZ Fashion Awards

This event is **open to all Technology students** (fabric) and has an incredible array of prizes including two sewing machines as student prizes plus other 'items' to enhance practice.

Visit our website www.hettanz.org.nz and click on News *or* contact our secretary Carmel secretary@hettanz.org.nz for entry forms and more information.



## Advocacy – Techlink

This year has demonstrated that subject associations do have a critical role in advocacy for their members. The recent announcement about Techlink has affirmed the need for all of the Technology subjects to work collaboratively when there is an issue related to Technology Education. That there is TESAC has enabled this **but** the Techlink issue also calls for individual teachers to make their voices heard. *Many voices are louder than one!*

The TESAC committee meets again on 15 September – if there are other issues of concern that the group could address collaboratively, please give feedback to your subject association representative. *What is not known cannot be addressed.*

**Adrienne Reeves**
*HETTANZ President* president@hettanz.org.nz

### TENZ UPDATE
# Association News

The second TESAC face-to-face meeting for 2012 was held last weekend at St Bede's College in Christchurch. These meetings provide an opportunity for executive members of the four associations to come together to update the group on individual association 'happenings' and to discuss current issues and common concerns. It quickly became evident at this meeting that that there are still a number of similar concerns being experienced by each of the association. These include ensuring effective communication with members and unexpected changes at executive level, often due to workload issues. However, representatives were able to focus on many positive things, with much of the discussion being centred on the 2013 TESAC conference. It is expected that organisational details will start to firm up and regular updates will appear in t-news.

Cliff Harwood, who is contracted to the MOE in the role of National Technology Programme Manager, talked to the group about recent developments in MoE-funded initiatives planned for this year – he has highlighted these in previous t-news reports this year.

Glynn McGregor from the t-news team also attended the meeting and outlined the planned structure for the review of the publication, scheduled for Term 4. The focus of this review is to determine how t-news can best achieve its goals, and on strategies that can be implemented to ensure sustainability. The TESAC group discussed how the subject associations would be able to play an effective role in the process to ensure that the feedback provided is reflective of all groups involved in the Technology learning area.

I was able to report to the TESAC group on the upcoming TENZ mini-conferences to be held at the start of the next school holidays. Our original plan was to set up mini-conferences running on the same days in all regions but this did not prove to be logistically possible. However, the two courses confirmed for Auckland and Christchurch have been able to be structured to meet the needs expressed by

TENZ members in the region and indications are that they will be well supported. There is still time to register for both events – if you go to the events page on the Techlink website you will see the programmes being offered and how, or make contact with the regional chairs directly: M.Patterson@auckland.ac.nz and Paul.Snape@canterbury.ac.nz

Angela Christie, Director of the Schools team at IPENZ, was invited to take part in our September TENZ National Council audio-conference. She gave the group an update on the current situation in terms of the change of procurement model for the provision and publication of MoE-funded materials development, previously carried out in the Technology learning area through Ministry funding of the Techlink website.

The mutually supportive relationship between TENZ and IPENZ is one that has evolved over very many years, and which was formalised in 2005 with TENZ becoming a Technical Interest Group within the IPENZ organisation. This has produced a number of important benefits for TENZ members, not least of which is the effective management of our financial matters – which removes a huge administrative load from the national Council. We were made aware of the potential implications of the loss of MoE funding on the level of support that IPENZ may be able to provide for Technology education, but Angela was able to reassure the council that as a Technical Interest Group, its present level of support from IPENZ would continue.

One example of the support that has been building is the IPENZ Foundation Scholarships (promoted in the attached flyer). There are a number of Scholarships available, both for those studying towards a four year Bachelor of Engineering (BE), Bachelor of Engineering Honours (BE (Hons), or a three year Bachelor of Engineering Technology (BEngTech) degree. I would encourage teachers to make their students aware of this opportunity. Applications must be received by 5 October 2012. Further details on how to apply can be found at: www.foundation.org.nz/Foundation_Application_Form.pdf

Finally, I'm pleased to report the progress being made by the management group led by TENZ Council member John Williams on the introduction of an Australasian Journal of Technology Education (AJTE), with planning for the online publication of its first issue in mid-2013 well on track. You can log onto the website at http://ajte.org to keep in touch with progress.

Best wishes for a positive end to the school term and an enjoyable and refreshing break.

**Wendy Fox-Turnbull,** *for the TENZ National Council*

## NZACDITT UPDATE
# Association News

It has been a busy and hectic term for us all – this newsletter serves to provide a snapshot of news and successes from around New Zealand. If you have news or interesting information, please email me personally and I will try to get this information out and about!

## President's Update

Well, September is going to be the biggest month of my life. I will have baby number three arrive (due on the 22nd). Life is hectic at home! My oldest boy (nearly four) can recognise and do the ABCs on the keyboard, and can do the first 20 elements on the periodic table, my daughter (20 months) nearly bought me a hotel room in Paihia from TreatMe. Yikes!

I am starting to look at preparations for the Wellington combined conference for 2013; I am deciding whether to mark Level 2 externals; my students are now moving into the final term of the year; and I get to evaluate how the Level 2 Standards are working.

## University Entrance updates

I recently sent a number of emails to the helpful people at NZQA with regards to University Entrance. This is a summary of the answers I received.

From 2014 only achievement standards can contribute towards UE, so unit standards can still be used within a course but they will not count toward the 14 credits required from the approved subjects. Students can effectively gain all three of their required approved subjects from Technology subjects. You still need to have 14 credits from each course to meet the requirements for approved subjects for UE.  In addition, if a student, for example, achieves all 18 credits in the Digital Technologies class and only 10 in the Hard Materials class, this still gives them 28 Technology credits which equates to 'two approved subjects'.

If you have questions on this, email UEreview2010@nzqa.govt.nz. Share what you find back with the group please!

## The New Zealand Programming Competition

This competition took place recently around New Zealand. It is a fun, cooperative competition that you should include in your school calendar – see www-webdev.aut.ac.nz/NZPC/Contest/Scoreboard. aspx. Get a team entered for 2013, the kids actually enjoy it! Congratulations to Burnside High School, the winners of the High School component – www-webdev.aut.ac.nz/NZPC/Scoreboard/School/scoreboard.html.

## Science Fair Competitions

Science Fairs have a Technology component that allows students to enter Programming, Electronics or anything Technology! The prizes are amazing, big cash prizes and big university prizes!

Nathan James from Burnside High School developed a phone application that allows you to use your phone in the supermarket to alert you when you go past something that is on your shopping list. He placed second overall at the Canterbury-Westland Science Fair, and won a number of categories:

- Institute of Electrical & Electronics Engineers (IEEE) Prize – Most innovative electrical/engineering/embedded project
- Institute of Engineering and Technology Christchurch Prize – Best engineering and technology exhibit.
- SLI-Systems Awards
  - Year 9-10 Technology – First Prize for best use of computer technology for processing a project
  - Best in Fair Prizes – Second Place.

Nathan was asked to visit SLI Systems to present his project to 30+ engineering staff from Christchurch, Queenstown, Auckland and California.

Check them out! www.canterburysciencefair.co.nz, www.sciencefair.org.nz and www.realisethedream.org.nz/regional-events.php

## Technology Scholarship

Recently I organised a video conference with National Coordinator for Technology Lesley Pearce, who guided me, a number of other teachers and a selection of students through the secrets of NCEA Technology Scholarship. The info is hosted on the GCSN (Greater Christchurch Schools Network) http://gcsn.school.nz. This site has lots of other resources – look specifically at http://bit.ly/QrCglY for the Scholarship Information. Many thanks to Lesley.

## Alice Programming for Girls

As a push for this competition, have a look at www.pc4g.org.nz and join in. Our school recently put a notice out for a Year 9-11 Girls Programming/Computing Club. The Universities and Polytechnics are keen to help support schools doing these things. Just put a notice out, and make a start!

## Vex Robotics

Vex Robotics is a fully fledged Robotics Competition. It is growing in the main regions and New Zealand is a superstar in this worldwide competition. http://bit.ly/Q73NaH. Get your seniors into this, ask for some STAR Funding and get competing. This gives students a taste of Robot Mechanics. It is a very competitive team sport using metal, gears and brains.

## Code Avengers

Code Avengers has free interactive online courses that teach the basics of web design and computer programming in a way that makes learning fun and effective.  Code Avengers also has great support for teachers, with live feedback of student progress. The courses follow the New Zealand NCEA high school curriculum. Courses for Level 1 programming (1.45, 1.46) and web design (1.43) are currently available. Level 2 courses will be available in late 2012, and Level 3 for term 2 in 2013. See www.codeavengers.com.

**John Creighton,** *NZACDITT President*

## NZGTTA UPDATE:
# A day in a year to remember

Wow! Where has the year gone? I don't know about you, but although teaching is still a great job, there are times when it is awesome to frustrating and anything and everything in between.

Starting with the 'awesome' – our regional Technology seminar Saturday in the Central North Island was very successful and those attending remarked on just how good it felt to come to a course where everyone was so positive. Numbers attending finished up at 135 teachers, a small handful of Scholarship students and 18 presenters, all up 162 and a very warm sunny day it was as well.

With the day split up into the four main areas of Technology: Materials, DVC, Digital Science and Food, there was a lot going on in the four separate venues and the MoE advisors, expert teachers, Futureintech Ambassadors, visiting university lecturers and sales representatives all did a fantastic job. Seeing 50 Foodies all in one space having what many regarded as the most informative day of their year made all the hard work done by Lauren Atkin, Hamish Carr and the team here at Otumoetai College seem worthwhile.

Thanks also go to HETTANZ Waikato/ Bay of Plenty for covering the cost of the presenters' gifts.

My personal warm fuzzies from the day came from seeing the links between the Universities and teachers becoming much stronger.

Shane Gooch from Canterbury, Heather McClean from Massey and Anthony Heppinstall from Otago all remarked that they had not realised just how much was happening at the secondary school level that would benefit their future students chasing degrees.

Another major benefit from such a successful day was that the separate Technology groups have already begun to organise other future events individually. Well done to them – we live in a self-help world, and the best way to get something organised that suits your needs is to be part of the planning.

Now for the 'frustrating' part of the year. We have a government that likes to speak so boldly about how technology and innovation – that "good old Kiwi ingenuity" we are famous for – will be our salvation from the global financial crisis. So, how is it that Technology education seems always to be amongst the first casualties in education?

Earlier in the year it was the Technology teachers in junior schools that were in the firing line, but thanks to a massive public outcry, we saw a reversal of this shameful decision. Sadly, it seems that we are soon to lose our most treasured Technology website, Techlink, as we know it. Discussions so far with the Ministry, although ongoing, are yet to convince me that it is anything more than a financial decision. There is much talk of there being a transition of the valued material to one of the Government websites, but why?

Teachers certainly didn't ask for Techlink to go. It is superbly maintained and constantly upgraded by the most knowledgeable Technology professionals in the country. At almost 2,000 daily visitors to the site, surely there is clear evidence of its usefulness. Don't fix what isn't broken, I say.

Access to the site is so simple, free, and the ready availability of the most up-to-date and relevant material is a perfect match to the curriculum. Can we be assured that in its new form it will be as effective?

Unlike the earlier government policy reversal, this time we don't have the awareness of the public, so whether we manage to keep the Techlink website or similar so effective, will, I believe, rest in the hands of us, the actual teachers, who rely upon this most up-to-date resource.

Be part of the solution, have your say, support your association, and be a proactive voice. With all the changes planned by the Ministry at present it seems, to me at least, that many from within it are nervous to say what they really think. That means it really is up to teachers to speak up and be heard. This association has a voice, do you?

**Kevin Meyer**
*President of New Zealand Graphics and Technology Teachers Association and proud to belong to it!* – kmeyer@otc.school.nz

# Vocational Pathways and Youth Guarantee

The Youth Guarantee scheme includes a series of initiatives including Vocational Pathways, trades academies, fees free places, careers education and learner support.

Five new sector-based Vocational Pathways have been developed through a partnership between government, education and industry. They are:

- Construction and Infrastructure
- Manufacturing Technology
- Primary Industries
- Service Industries
- Social and Community Services.

The Vocational Pathways identify the real knowledge and skill requirements of key industry sectors, providing certainty to learners and their families that their subject choices are relevant and connected to employment opportunities.

"They are designed to provide new ways to structure learning programmes that lead to achievement in NCEA, with a focus on all students achieving at NCEA Level 2," says Josh Williams, Vocational Pathways Manager for Youth Guarantee Networks at the Ministry of Education. "They describe the learning and achievement valued by broad sectors of the economy".

CLIFF HARWOOD is contracted to the Ministry of Education as Technology Programme National Manager to provide strategic leadership to and professional management of the GIF Technology Initiative, and associated projects. This involves Cliff working with Technology educators and the wider Technology community across the country.

Josh says that the Vocational Pathways do three things. They:

- describe the different sectors to students: what they are; what they do; the roles and occupations in each sector; why they are important; and, how *The New Zealand Curriculum* key competencies relate to the sector.
- recommend standards valued by industries, including achievement standards, generic standards and sector-related standards.
- provide work and study maps which identify a wide range of roles and occupations that relate to the sectors, and the qualifications associated with these roles.

The Vocational Pathways are designed to provide young people with a new tool to understand a broad range of post-school opportunities in further study and work. "They enable learners to have a clearer sense of purpose and direction for their learning, and make more informed choices about their next steps".



*Josh Williams, Vocational Pathways Manager for Youth Guarantee Networks at the Ministry of Education*

The Pathways present a co-ordinating framework for schools and tertiary providers as they design learning programmes that use a great many of the standards already being used to assess achievement..

"They can support programme design within and across *The New Zealand Curriculum* learning areas; within and across multiple providers; and integrate academic and vocational learning," says Josh.

"Using the Vocational Pathways, students will know which of their credits will be valued from the perspective of five sectors. The five initial Pathways do not cover everything – about 75 percent of the workforce is the best estimate – and other Pathways may be developed later".

The published lists of recommended (and strongly recommended) standards for these sectors should also assure learning programme designers that the standards they intend to assess against are fit-for-purpose as part of a broad and enabling foundation



*Social and Community Services / Manufacturing and Technology / Services Industries / Construction and Infrastructure / Primary Industries / NCEA Level 1 / Level 2 / Level 3*
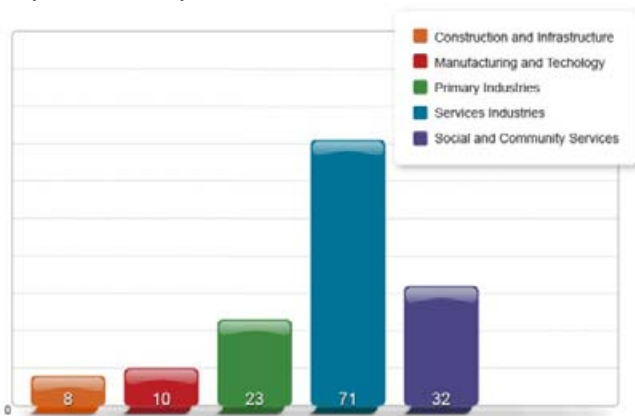
qualification. This leaves a much shorter (but still very flexible) list of standards, meaningful to whole sectors, to design and assess programmes of learning.

So, now that we have them, what do we do with them? One proposal is to use the Pathways to develop 'vocational profiles'. These will provide the facility for any student to see which of their credits are valued by which sectors. These will in turn be linked to the work and study maps, to show students which work and study possibilities relate most closely to their strengths and achievements to date.

This profile can be used proactively, to inform subject and course choices, and retrospectively, to provide a simple visual of the 'shape' of any NCEA.

### Sample vocational profile



Legend:
- Construction and Infrastructure
- Manufacturing and Technology
- Primary Industries
- Services Industries
- Social and Community Services

Values: 8, 10, 23, 71, 32

As well as being useful for planning purposes, the vocational profile also provides a simple visual format for end-users, such as potential employers, when a student has achieved credits in areas their sector has identified as valuable, and when they have undertaken learning that relates to industries like theirs.

A key next step for the Vocational Pathways project is the development of guidance for learning programme design using the Pathways, and the production of a range of contextualised assessment resources, to show how educators can use contexts derived from these sectors to develop evidence of achievement of curriculum-related standards.

Finally, as the Pathways graphic on the previous page suggests, while the focus of the Vocational Pathways and the wider Youth Guarantee is the achievement of NCEA Level 2, the Ministry is looking at further developing Vocational Pathways for Level 3.

"Many students achieve their Level 2 using some Level 3 standards, so these need to be able to contribute to vocational profiles," says Josh. "Adding Level 3 to the Vocational Pathways will also make it clearer that 'vocational' does not mean 'non-academic', since a great many degree-level opportunities relate to the five Pathways sectors."

The effective implementation of Vocational Pathways will contribute to achieving the Better Public Services education targets announced in June of 85 percent of young people attaining NCEA level 2 or equivalent and 55 percent of 25 to 34 year olds gaining a level 4 or above qualification.

### NOW is the time to have your say!

*The five draft Vocational Pathways for NCEA Levels 1 and 2 have now been released for sector consultation and Technology standards are recommended in all of them.*

*Please visit www.youthguarantee.net.nz to explore the draft Pathways, download the materials and provide your feedback.*



**Technology standards are recommended in all five draft Vocational Pathways. What might be the implications of this initiative for teaching and learning in Technology? Find out more and provide feedback on this significant initiative at www.youthguarantee.net.nz.**

Trades Academies were the first initiative in the Government's Youth Guarantee programme to take effect in schools. In July, the Ministry released Youth Guarantee Vocational Pathways support materials for consultation. The Vocational Pathways are designed by the Ministry to simplify the existing array of options for students and their families and provide a coherent roadmap to get to broad sectors of industry.

The Ministry believes that a simplified framework of vocational options will make it easier for the education sector to develop and deliver programmes of learning that lead to meaningful destinations, and for employers and industries to understand what students have achieved.

# Helping Pasifika students to learn and achieve

" *Successful teachers have many different ways of helping their Pasifika students to learn and achieve. These teachers adapt their pedagogy to the needs, interests, language and culture of their Pasifika learners, enjoying them as individuals and caring about them as learners. While keeping the lesson's learning focus clear and explicit, they use strategies that motivate, engage, challenge and support their Pasifika learners in ways that help them to become confident, successful and independent learners.*

*If we are to make a difference to students, improving teaching practice should not be considered an end in itself but should be judged according to the impact on students.* "

*Teacher Professional Learning and Development: Best Evidence Synthesis Iteration, page 12*

THIS IS A REGULAR SERIES by the two National Coordinators – Technology Cheryl Pym and Lesley Pearce. If you have any queries, please contact them at:
Cheryl Pym: email cheryl.pym@otago.ac.nz;
Lesley Pearce: email l.pearce@auckland.ac.nz

## Effective teaching for Pasifika students

Kia orana. Fakaalofa lahi atu. Mālō e lelei.Tālofa lava. Talofa ni.

The Pasifika influence in our schools continues to grow. The percentage of Pasifika students in New Zealand schools is predicted to double over the next 40 years. This means that learning to teach Pasifika students effectively is an increasingly important challenge for New Zealand teachers.

Our Pasifika students work best with teachers who believe in them, set high standards and, tell them where they are and where they need to move to.

The challenge facing teachers is in the fact that Pasifika students have not always fared as well in our schools as they might have. Pasifika parents are known to value education highly, so why are Pasifika students, as a group, not high achievers?

See: leap.tki.org.nz/Pasifika-in-New-Zealand

## Who are our Pasifika students?

Pasifika is a collective term used to refer to people of pacific heritage or ancestry who have migrated or been born in Aotearoa New Zealand. They identify themselves with their indigenous Pacific countries of origin because of family connections with Samoa, Cook Islands, Tonga, Niue, Tokelau, Fiji, Solomon Islands, Tuvalu and other Pacific countries.

" *Effective teaching makes a real difference to how well Pasifika students achieve in education.* "

*From: leap.tki.org.nz/Pasifika-communities-in-New-Zealand*

Effective Technology departments should have high-quality teaching practices. Teaching practices that motivate, challenge and are responsive to Pasifika learners. They will be shaped by strong, mutually respectful teacher-student relationships.

## Effective departments consider the following:

- Building relationships with Pasifika students that are mutually respectful, caring and open, so that students are motivated and engaged. (Where teachers and Pasifika students develop strong relationships with each other, they each gain a more holistic view of the other person as an individual.)
- They integrate the Pasifika culture into their pedagogies, creating a community of learners who succeed socially and academically.
- Teachers draw on the positive resources of their Pasifika students and value the diversity of their experiences.
- Teachers have high expectations that their Pasifika students will achieve and support them to take risks and be critical and engaged.
- Data is collected to help track Pasifika learners' achievement, and programmes of learning are informed by the data.
- Strategies used to engage students in their own learning are grounded in responsive and caring relationships with a clear focus on learning.
- Pasifika students are allowed to work collaboratively.

Transpower Neighbourhood Engineers Awards

## Teaching the technology curriculum has never been easier.

**Register your interest at www.nea.org.nz**

- Value and use the languages of Pasifika students – use the correct pronunciation of their names.
- Develop strong home-school connections to involve and value parents in ways that impact on their students' motivation and academic achievement.

## What Pasifika students say makes a good teacher:

- "I think a good teacher should be supportive, someone who can acknowledge and recognise that you know that you have problems, and they should tend to those problems. But most importantly for me is the support and just to be there for the students."
- "A good teacher is a teacher who really knows their students, because then they know our weaknesses and our strengths and make use of those weaknesses to work with us to better what we need to improve on, and to understand our strengths so we can aim higher and do better with those strengths."
- "Even when we don't get it they will try and find another way for us to understand. It's good when they explain it properly."
- "Encourage us to do our best. Come into the classroom in the morning with a happy face."
- "I like the teacher to actually lay out what's expected, his or her expectation from us students, and then I would work hard trying to actually live up to that expectation."

## Questions to discuss in your departments:

- What does your school's data tell you about the achievement of your Pasifika students? What doesn't the data tell you?
- Do you use data on Pasifika student achievement to track your department's performance and improve your teaching? If so, how? If not, why not? What will you do about this?

- When you receive Pasifika students who are achieving at levels below the national norm, how do you go about accelerating their learning?
- Is there any particular teaching style or technique you use that works particularly well for Pasifika students in the classroom?
- What's your personal vision for Pasifika students in your department?
- What kinds of support do your Pasifika students have to help them to achieve academically and socially? What more might be needed?
- Is there a specific focus on raising the achievement of your Pasifika learners? If so, how do you know it's working? If not, why not?
- Can you give examples of some strategies that you have used and find particularly effective with your Pasifika students? What outcomes have they achieved as a result? Have you shared this information with others? If so, who? If not, why not?
- Do your Pasifika students have access to the success criteria as well as the learning intentions? If so, what difference does this make to their motivation, engagement and achievement patterns? If not, do you think that they would benefit from access to these?
- What seating arrangements do you have in your classroom? How do these support the learning of your Pasifika students?
- Is the relationship you have with your Pasifika students different from the relationship you have with other students? If so, in what ways is it different, and why? If not, should it be different? (Teachers who integrate cultural values and socio-cultural norms explicitly into their pedagogy increase levels of trust, acceptance, sharing and mutual support between students.)

## Links

- Pasifika Education Plan:
  www.minedu.govt.nz/NZEducation/EducationPolicies/PasifikaEducation.aspx
- Mid-term Review of the Pasifika Education Plan 2009-2012:
  www.educationcounts.govt.nz/publications/series/22967/mid-term-review-of-the-pasifika-education-plan-2009-2012
- Effective teaching for Pasifika students:
  www.pasifika.tki.org.nz/Effective-teaching

# Food for thought…

It seems to me that no matter when I turn the TV on at the moment I have the choice of at least three cooking shows to watch. We are living in a period of history where food is not only energy for the body, it is art and entertainment as well — a good thing in my book. Food, it seems, and the myriad of concepts it represents, is taking an increasingly important role in our society and life.

This, along with my recent experiences visiting initial teacher education students on practicum in schools across the North Island, brings me to review two papers on Food Technology that were presented at the recent PATT (Pupils Attitudes Towards Technology) conference. The Proceedings (www.ep.liu.se/ecp_home/index. en.aspx?issue=073) are very accessible and readable and contain other papers that address pretty much all aspects of Technology education.
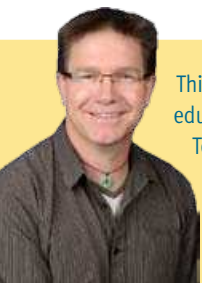
This is one of a regular series of articles reporting on education research and publications relevant to New Zealand Technology teachers from across all four professional subject associations. John Lockley is a lecturer in the Department of Mathematics Science and Technology Education, Faculty of Education, University of Waikato.

The first paper by Rutland and Owen-Jackson (pp405-414 of the Proceedings) explores the question of what secondary school students should learn in a modern Food Technology curriculum. The context of the research is junior secondary students, ages 11 to 14 years and is based in England.

I believe the findings speak at an international level and have relevance to the same question here in New Zealand, with the descriptions of intended learning mirroring nicely what I have been seeing in classrooms over the last few weeks. The research compares the intended learning being presented in a group of schools by looking at their schemes of work in Food Technology, with a framework of expectations developed in consultation with industry and society stakeholders.

I find this approach interesting, given the recent similar approach taken to developing the material guiding the Youth Guarantee framework here in New Zealand.

The research showed a number of areas that current Food tech practice is strong in, such as nutritional education and developing cooking techniques. It also identified a number of gaps that are worth considering.

The discussion of the intended classroom practice from the different schools is particularly useful and leads to a number of recommendations about how to further develop programmes of work to better meet the needs of students for their futures. I think this section is particularly useful for an HoD or teacher wanting to continuously improve their programme or classroom practice.

The second paper picks up a similar theme and asks what students value in their Food Technology experiences. The paper by Suzanne Lawson (pp274-280 of the Proceedings) again takes English students aged 11 to 14 as the subject but the results, I believe, speak just as clearly for New Zealand students.

The paper investigates students' perceptions of Food Technology and thankfully confirms the obvious, that they enjoy cooking and eating the food they cook. It also confirms what most Food teachers instinctively know, that the students don't like writing. I am always pleasantly surprised and encouraged when research tells me what as a teacher I already know to be the case.

The value of the paper though comes with the deeper findings. The students who were interviewed make a strong case about the other things that they value in Food Technology, the stuff that as a teacher we might not see if we were not looking for it. Some of the findings I believe set clear challenges and have implications for what we do in our classrooms and how we do it. Taking just one for example, the finding that most students "like Food Technology because we get to use our own ideas rather than just being told what to do" may be a challenge to address in some programmes.

For me these two papers bring a timely focus on what we do in the foods classroom and why we do it. Developing and refining programmes of work to best meet the needs of our students is a time consuming and complicated process. Knowledge of our learners and local curriculum imperatives inevitably guide our decisions, but sound educational research can give much … food for thought.

# PATT Conference 2012

A healthy number of New Zealanders attended and presented papers at PATT 26 Conference, held recently in Stockholm, Sweden. This conference was part of a two-conference arrangement organised by the Royal Institute of Technology and the Centre for School Technology Education (CETIS), Linköping University, under the broad common theme of Technology Education in the 21st Century.

The New Zealand contingent included Louise Milne (University of Waikato), Wendy Fox-Turnbull (University of Canterbury) and Vicki Compton (University of Auckland), who all took time to reflect on what was a very enjoyable and stimulating conference.

Louise says she had been aware for some time that PATT was a particularly worthwhile conference to attend.

"It has a reputation of being a very friendly conference and supportive of both new and experienced researchers, and naturally the opportunity to visit a city like Stockholm was very appealing," she says. "Many of the regular participants at this conference have been very influential in terms of the research they have carried out in Technology education, and much of the literature which we use at Waikato in our pre-service papers has come from this group."

She used the conference as an opportunity to present a paper that emerged from her PhD topic: 'Parents as teachers: Using parent helpers to guide young children's technological practice'. Louise, despite her considerable presentation experience, admits that this one was a slightly nerve-racking experience. "However, once you get underway the teacher in you takes over, and when you know your data and enjoy telling the story, it seems to flow reasonably easily."

She was impressed by the high quality of the presentations and of their relevance to her present work. "It was particularly useful in that the stories came from around the world, and we have all faced similar challenges over the years in establishing and maintaining

Technology education within our curricula," she says.

"With my interest in teaching Technology in primary classes, I was particularly interested in the work of Clare Benson and Jill Hope. However, it was a comment made by David Barlex which resonated strongly with me. This related to the importance of students identifying what they need to know in order to achieve their outcome. I believe this is a crucial step in young teachers' planning, as well as being part of their students' practice, as it briefly steps them away from the curriculum and encourages them to think logically about what needs to be achieved before considering the guidelines of the curriculum. It's easier to transfer understandings from one context to the next if you understand the purpose of each phase of the technological process."

Attendance at the conference gave Vicki Compton the opportunity to connect with international colleagues and to catch up with what's going on in the rest of the world of Technology education.

"There's very much a sense of meeting with a group of friends," she says, "and its always encouraging to see new people coming in and expanding the group – I go as much for those reasons as for the opportunity to share with the international audience what has been happening in New Zealand."

Vicki had a challenging schedule with three presentations, including a keynote address to the joint conferences. She reflects on the continued high level of international interest in what's going on in New Zealand, " an interest and respect which is mirrored in the size of the audience for all of our presenters," she says

Wendy Fox-Turnbull also reflected on the fact that New Zealand continues to be very highly respected in Technology education and "on the pride that can be taken in the significant contribution New Zealanders made to this conference".

Although she was presenting her own paper on *Funds of Knowledge in Technology Education,* she was also looking carefully at the behind-the-scenes administration requirements from an

organisational perspective. Wendy says that the PATT conference continues to be a significant event in the international Technology education calendar and provides an opportunity for researchers from a range of different countries to present their work on an international stage.

"In the past these conferences have been held around Europe, in the USA and South Africa, and in December 2013 PATT27 will be held in New Zealand. Although a little nervous, I'm very excited that we in Christchurch have now been given the opportunity to host such an important event," she says.

Louise says next year's opportunity is too good for the Technology education community in New Zealand to miss out on. "We won't get such a gathering of international researchers and academics in the field of Technology education assembled in one place in New Zealand again for a long time," she says. "There was great interest in making the journey down to New Zealand at the Stockholm conference, and if Christchurch matches Stockholm in any way, it will be a hugely informative, supportive and inspiring conference – and no doubt plenty of fun as well," she confidently promises

The full PATT26 conference proceedings can be downloaded at www.ep.liu.se/ecp_home/index.en.aspx?issue=073. And watch out for further details on PATT27 as the information becomes available.

# Plastic and equipment now available direct from industry leader

*This advertorial was submitted by Cambrian Plastics.*

Cambrian Plastics is, as the name suggests, one of the industry's founders in New Zealand. The company started 30 years ago to service the point-of-sale and display industries, and now services many industries from its manufacturing plant in Henderson West Auckland.

Educational Plastics has recently been set up to service the education sector and provide a range of materials and equipment sourced from the world's leading plastic suppliers.

Company director Philip Wilkinson says: "We are in a unique position to be able to offer advice and equipment that is industry current, and this will in turn provide schools the opportunity to train students with equipment they are likely to then use as they leave school and head into the work force".

*ABM700*

**LINE HEATERS** for folding most thermoplastics are available from 300mm to 3m in width. These simple wire heaters offer a further dimension to your flat plastic process, by allowing you to form simple boxes and brochure holders with ease.

**VACUUM FORMING** became a significant manufacturing technique used in New Zealand through the early 80s when the bathroom industry lead by companies such as Clearlite and Englefield pioneered the use of multilayer products for their ranges of baths, showers and vanities.

Vacuum formers are now used by most major manufacturers from refrigeration, to transport, and signage. Educational Plastics markets a high spec ceramic heated vacuum former which unlike competitive products means that the plastic sheet

*Formtech 300 xq*

is heated consistently without hot spots and therefore provides you with consistent thickness.

**LASER CUTTING** is now a common process throughout industry and laser cutters are beginning to appear through the technology departments in schools.

A small-scale laser capable of cutting acrylic, custom wood etc can now be purchased for around $20,000 whereas less than five years ago this technology would have cost five times that.

Educational Plastics supply a machine that can run off your standard PC and uses very simple drawing programs, with layers highlighted by colour so training is very simple and students will pick up the process very quickly. Cambrian Plastics is using the same equipment in-house, so advice is only a phone call away. The new laser equipment does not require gas bottles etc, as tubes are pre-charged with the appropriate gasses and are easily replaced by local technicians if and when required.

**SHEET PLASTICS** are available in a multitude of colours and types, commonly acrylic is the material of first choice and this is available in standard 1200 x 2400 sheets or cut to your size requirements. Generally a 24-hour turnaround on most requirements is possible, with laser-cut parts cut to your drawings within a week.

**FOR FURTHER DETAILS** regarding plastic fabrication and forming equipment, e-mail Phil phil@educationalplastics.co.nz or check out the website at www.educationalplastics.co.nz.

Orders are being taken now for laser-cutting equipment for supply prior to Term 1 2013! Most other items held in stock.

# Google Aps Education Edition

Looking through the 'Software for Learning section' of the TKI website we came across an impressive promo for Google Apps.

While most everybody is only too well aware of Google's ubiquitous search engine, the company has also produced a number of sophisticated and user-friendly web-based applications for collaboration and communication, and Google Apps Education Edition brings all of these features, and more, together in one package. The good thing is that it's available free to schools, and all you need is an internet connection to get started.

Key features include

- **Google Mail/Gmail** which can eliminate the need for an onsite mail server at school by routing all of your emails through Google's servers. Each teacher and student can have their own account with free online storage. You can use this service with your existing email client, use Google's own email service Gmail, or have a mix of both to suit your school's requirements.

- **Google Docs** are a suite of online word processors, spreadsheets and presentations, where students and teachers can collaborate and communicate with each other on the same document in real time.

- **Google Forms** allow students to create a variety of questionnaires online that can be emailed rather than handed out. The results are then automatically collated into a spreadsheet which can be published or adapted to a graph for easy analysis.

- **Google Sites** provides an easy way to develop a website with HTML or by using the easy and intuitive 'website creator' to do the hard work for you. Any sites, including existing ones, can be hosted on Google's servers for free.

- **Google Calendar** provides an online calendar that can be shared with the whole school or selected people. It can also be immediately updated and synchronised with your mobile.

More details of the benefits to be gained from this software, including how to get it, can be checked out on the Software for Learning site at softwareforlearning.tki.org.nz/Products/Google-Apps

# Designboom

**designboom®**

This is another of the growing number of must-visit websites for Technology teachers and students at all levels. It's a site packed full of good photos and video clips and detailed insight into the process of design in Technology. If you're looking for material to stimulate classroom discussion or provide a bit of design inspiration make sure this site is on your bookmarked list.

Their Technology section (www.designboom.com/technology.html ) tracks the latest progress and the hottest tech gadgets.

This month's featured products include an introduction to 'solbot'- the robot that can maximise power output from a bank of solar panels – increasing the power output of a single solar panel by 40%.

Each lithium battery-powered robot measures approximately 1.5-metres long and 1-metre high, and performs dual-axis adjustments. As the sun moves approximately 10 degrees every 40 minutes, the 'solbot' is designed to manage up to 200 panels in 40 minutes before it begins its round on the track again, re-orienting the cells according to the sun's position. As one robot moves along its path, another is charging in a docking station. Outfitted with a



GPS, sensors and wireless connection, the 'solbot' is able to collect data on the performance of these units, relaying data back to the owner.

See www.designboom.com/weblog/cat/16/view/23421/qbotix-robot-maximizes-solar-panel-output.html

*Want to know what this is? Go to www.designboom.com/design.html to see how one product designer looked to make crawling under furniture to untangle cables a thing of the past,*

techlink
INVOLVE » EVOLVE
www.techlink.org.nz

## New Audio Snapshots section

These recordings were done by teachers who regularly use Techlink to support their teaching. They offer insight into how these teachers have used particular features on the site to benefit their students' learning.

Each recording is 5-10 minutes long and offers practical suggestions for how to make the most of the material available on Techlink, and is accompanied by a full transcript.

- **Conceptual Modelling:** Julie McMahon talks about how she used Techlink to support programme planning and assessment in a Level 2 NCEA Digital Technology programme.
- **Using Showcases and Case Studies:** Barbara Knight gives useful tips on how she uses Techlink with her senior classes, looking in particular at the Student Showcases, Scholarship Exemplars and Case Studies.
- **Using WOW material:** Kylie Merrick talks about how she uses the World of Wearable Art material from the Techlink website when planning and teaching a Year 13 project.
- **Programme Planning:** Julie McMahon discusses the ways in which she has used Techlink to support programme planning and evaluation across Columba College's Technology department.
- **Using Techlink:** Kylie Merrick gives useful tips on how to use and get the best out of the different areas of the Techlink site.

Access them all at : www.techlink.org.nz/teaching-snapshot/Audio_Snapshots/index.htm

## Latest Clasroom Practice Case Study

**Computer Game Development**
This course was structured around a focusing theme of video game design. Over the year, students design and create a video game prototype, a logo and accompanying marketing mater... More»

## Latest Technologists' Practice Case Studie

**EasiYo yoghurt-making system** EasiYo Products began producing a unique yoghurt-making system in 1992, a product so successful that that the company began selling overseas the following year. More»

## Latest Student Showcase

**Hinaki – Creating eel traps**
Students from Newton Central School in Central Auckland developed a hinaki (eel trap) using modern materials in a unit that combined cultural research, testing, Art and Hard Materials. More»

## Latest Teaching Snapshot

**New Product Development Process**
Food Technology teacher Sandy Goonan used the opportunity provided by her Endeavour Teacher Fellowship to focus on gaining a deeper understanding of new product development More»

## Latest Techlink facilities snapshot

**Whangarei Girls' High School**
Technology teachers at Whangarei Girls' High School had their strong working relationship enhanced following completion of new Technology classrooms. More»

## Latest Techlink resource review

**Engineering World magazine**
Engineering World contains a range of articles covering engineering-related issues in areas including science, technology, management, the economy, politics, law, design, marketing and the environment. More»

## TECHLINK: Technology in the News

Just a few of the latest Technology news items from www.techlink.org.nz/latest-news/archive.cfm

Technology hits New York runway *[stuff.co.nz, 10 September]* The New York Fashion Week show had models wearing the cutting-edge Google glasses device, setting off looks from Diane von Furstenberg's spring/summer 2013 collection. *Discussion starters: Nature of Technology: Blended technologies; Digital Technology: Augmented reality*
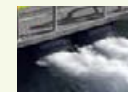
Southland inventors revolutionise boat propeller system *[TV3 News video, 9 September]* A couple of Southland blokes have invented a propulsion system that combines the best features of a water jet with those of propellers.*Discussion starter: Construction and Mechanical Technology: Propulsion systems – improvements in efficiency*

Apple patent would disable smartphones by location *[Mashable.com, 9 September]* Apple has been granted a patent that would make your smartphone useless when entering an area deemed too sensitive for mobile photo and video. *Discussion starter: Nature of Technology: Sociocultural influences – geo-fencing; restricting access to technology*

Web inventor: There's no 'off-switch' *[NZ Herald online, 6 September]* The inventor of the web denied there is an off-switch to turn off the internet across the globe. *Discussion starters: Nature of Technology: Sociocultural influences – political control; Technological Systems: information and communication system design – decentralised systems*

Passenger Planes of the Future May Fly 'Like Birds in Formation' *[Innovationwatch.com, 6 September]* European firm Airbus says formation flying could become a reality on high-frequency routes under their vision for flying from 2050 and beyond. The company also envisages planes taking off more steeply and gliding in to land to reduce noise and emissions. *Discussion starter: Nature of Technology: transport technology: sociocultural inluences – economic and environmental*

## ABOUT TESAC

The Technology Education Subject Associations Coalition (TESAC) was formed as a vehicle for collaboration and cooperation between the four participant associations in Technology education – HETTANZ, NZGTTA, NZACDITT and TENZ – for the benefit of student learning.

TESAC provides a forum for the open discussion of ideas and issues related to Technology education in New Zealand and makes recommendations to the individual subject associations. The aim is to help foster common identity for broader Technology education and establish common strategic goals, through communication between the participant associations.

TESAC offers the opportunity of considered shared response for emerging issues such as professional development and the re-training of teachers in Technology education, and aims to enhance community/parent understandings and perceptions of the subject. It supports the desire for general Technology education to be part of a broad balanced school curriculum.

## ABOUT HETTANZ

The Home Economics and Technology Teachers' Association of New Zealand Inc (HETTANZ) is the official subject association for teachers of Year 0-13 children and students and all other people interested in the areas of Home Economics, Technology and allied fields of Fashion and Design, Textiles, Soft Materials, Health, Human Development, Human Nutrition, Hospitality and Life Sciences.

HETTANZ is recognised as a vital and visible organisation actively working towards the objectives set and providing quality services and resources for the membership. The Association offers many benefits to teachers and ultimately their students which are part of the wider family that HETTANZ seeks to make a difference for.

For details of HETTANZ membership, see: www.hettanz.co.nz.

## ABOUT NZACDITT

The New Zealand Association for Computing, Digital and Information Technology Teachers (NZACDITT) is a new association created to advocate for our subject. The aim of the association is to create a warm, friendly community of teachers where we can share resources and speak with one voice to get our subject area recognised and supported.

NZACDITT was formed to:

- strengthen, encourage and improve the teaching of a broad range of Computing, Digital and Information Technologies in New Zealand secondary schools.
- promote, advance, support and guide teachers of a broad range of Computing, Digital and Information Technologies (henceforth "the subject") in New Zealand secondary schools.
- facilitate, negotiate and foster links/consultation between teachers/educators and government institutions on any matters relating to the subject.
- assist in the development, maintenance and review of the subject guidelines.
- promote the education, professional development and up-skilling of its members.
- assist teachers of the subject to keep up to date with current practice, and tertiary and industry developments.
- promote and advance the profile/image of the subject to students, government and educational institutions, IT professionals/organisations, industry and the public.

These things make up the Mission of NZACDITT.

If you have an interest, or would find these things helpful then join us. We are part of the current changes in our subject and need all the help and support that we can get.

For details of NZACDITT membership, see: nzacditt.org.nz.

## ABOUT NZGTTA

The New Zealand Graphics and Technology Teachers Association (NZGTTA) is a professional subject association set up to promote and support teachers of Graphics and Technology education in New Zealand schools.

NZGTTA offers:

- up-to-date information from the Ministry of Education (MOE), New Zealand Qualifications Authority (NZQA)
- links to supportive resources and assessment options (Achievement and Industry Training Organisation [ITO] Unit Standards).
- a New Zealand-wide network of regional branches and professional contacts.
- your chance to ask questions and have your say.

For details of NZGTTA membership, see wp.nzgtta.co.nz.

## ABOUT TENZ

Technology Education New Zealand (TENZ) is the professional body that:

- fosters the development of Technology in the New Zealand Curriculum.
- develops and maintains national and international links between Technology education professionals and with the wider technological community.
- supports professional, curriculum, and resource development in Technology education.
- encourages research in Technology education.
- organises a biennial National Technology Education Conference.
- operates as a special interest group that operates within IPENZ Engineers New Zealand

For details of TENZ membership, see www.tenz.org.nz.