

Regional Workshops – achievement, retention, and transitions

Contextualised learning: some examples

The Ministry of Education thanks these schools, tertiary providers and ITOs, which have been willing to share something of their journey with others.

Amuri Area School – timetable

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Amuri Area School has been successfully developing vocational pathways for students that include dual enrolment at Canterbury Tertiary College (CTC). A major restructuring of the senior school timetable has enabled better integration of school-based and off-site learning.

Manufacturing and Technology	Construction and Infrastructure	Primary Industries	Social and Community Services	Service industries
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Auckland West Vocational Academy

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Massey High School has established a number of vocational academies under the banner of Auckland West Vocational Academy. These operate in a variety of formats depending on the needs of the target students. All students opt into a complete programme of NZC and vocational learning, with tuition shared between MHS, Unitec, MIT and other tertiary providers.

Manufacturing and Technology	Construction and Infrastructure	Primary Industries	Social and Community Services	Service industries
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Canterbury Tertiary College

13

CTC is a partnership between CPIT, regional tertiary providers, industry and local secondary schools, providing a bridge between school, tertiary providers, industry training organisations, and employers.

Manufacturing and Technology	Construction and Infrastructure	Primary Industries	Social and Community Services	Service industries
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Hauraki Plains College

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Hauraki Plains College moved to an 8-line timetable to gain greater flexibility to meet the learning needs of a wider range of students.

Manufacturing and Technology	Construction and Infrastructure	Primary Industries	Social and Community Services	Service industries
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New Zealand Trade Academy

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The NZTA is a virtual school, linking schools, ITOs, and employers to provide pathways into careers in the primary industries. Students do much of their industry-related learning at school, but participate in a schedule of site visits designed to expand their vocational imagination, and, in years 12 and 13, spend time each week in site placements.

Manufacturing and Technology	Construction and Infrastructure	Primary Industries	Social and Community Services	Service industries
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Otahuhu College Health Science Academy

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This initiative is designed to provide an excellent, academically focused programme that prepares Pasifika students for tertiary study and entry into health science careers. The expectation is that all students will gain entry into a university programme that leads to a health profession. A unique feature of the academy is the partnership with the Pasifika Medical Association (PMA).

Manufacturing and Technology	Construction and Infrastructure	Primary Industries	Social and Community Services	Service industries
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Papakura High School Health and Sports Science Academy

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The Papakura High School Health and Sports Science Academy (HASSA) prepares Māori and other students for study at polytech and university and entry into health-related careers. Effectively a full-time programme, virtually all learning is integrated around health/sports themes.

Manufacturing and Technology	Construction and Infrastructure	Primary Industries	Social and Community Services	Service industries
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School of Secondary–Tertiary Studies

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A collaboration between Manukau Institute of Technology (MIT) and a consortium of Counties Manukau secondary schools aims to provide a seamless pathway from year 11 to tertiary education for students who need new purpose and clear direction. Also known as the Tertiary High School.

Manufacturing and Technology	Construction and Infrastructure	Primary Industries	Social and Community Services	Service industries
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Tairawhiti Schools Trades Academy @ EIT

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A developing partnership between Tarawhiti secondary schools – some of the most isolated schools in the country – and the Eastern Institute of Technology (EIT) is offering students a range of learning opportunities and broadening career horizons in ways that were not formerly possible.

Manufacturing and Technology	Construction and Infrastructure	Primary Industries	Social and Community Services	Service industries
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Technology Luge Project

43

For three schools in the Waikato, making a street luge has proven a hugely engaging project for boys taking level 1 technology. As they have learned new practical and technological skills, the students have also learned a lot about self-management, project ownership, and other vital workplace competencies. A competition is a major motivating factor.

Manufacturing and Technology	Construction and Infrastructure	Primary Industries	Social and Community Services	Service industries
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Amuri Area School – timetable

Amuri Area School has been successfully developing vocational pathways for students that include dual enrolment at Canterbury Tertiary College (CTC). A major restructuring of the senior school timetable has enabled better integration of school-based and off-site learning.

■ Focus

Trades, years 11–12.

■ Scope

Initially, Amuri Area School was the only school in the area to transport students to CTC in Christchurch. With the establishing of the base in Amberley, students from other schools have become involved.

At this stage, only Amuri Area School has radically restructured its timetable to facilitate participation in off-site learning.

■ Purposes

- To enhance student engagement
- To keep students in education by offering a broader range of programmes
- To improve students' transition from school into further education and/or work
- To increase student awareness of different vocational pathways and possible career options.

■ Key features

- Three subjects are taught in blocks of four contiguous hours.
- Two subjects are taught in two blocks of two hours.
- One subject is taught in four one-hour periods.
- The 25th period is used for sport.
- Students can now be timetabled for CTC (or other off-site training) on Fridays (or Thursday-Fridays) and attend without missing more than one hour's work for another subject.
- Because of local demand, CTC has now set up an outpost training site close by, greatly reducing travelling time.
- Parent help with transport is essential and required.

■ Initiated

2012 (timetable restructure).

■ Drivers

- To improve transition from school into further education and/or work
- To better cater for individual students' needs and provide a broad range of options from the trades to academic subjects
- CTC was offering an introduction to trades course that a number of students were keen to participate in
- Students going to CTC were missing up to 40% of their scheduled school programme – a major disincentive.

■ Partners

Canterbury Tertiary College

■ Programme

See CTC for information on the level 1 introduction to trades course (construction, motor and engineering).

Four students in 2012 were enrolled in a primary industries course with the New Zealand Trade Academy (NZTA).

■ Outcomes

More students are staying longer at school because the school is now offering programmes that engage their interests.

Of the 2012 trades academy students (the first cohort), one went into an apprenticeship, two into mechanical engineering at polytechnic. The four who were doing a primary industries course are now in a level 2 rural studies programme run at school.

All academy students (2012) gained NCEA level 1 and one gained level 2. Those in their second year (2013) are on track to achieve level 2.

■ Other outcomes

- Absences from CTC are extremely low.
- Students usually see greater value and relevance in their other learning as a result of what they do at CTC.
- The transition to apprenticeships and/or tertiary has become much more seamless.
- Students are now aware of a much wider range of employment opportunities.
- The school sees the broader range of programmes and new timetable as affirming the worth of all vocational pathways.
- The new timetable has had a positive effect on absenteeism because students realise that if they miss a day, they can miss a week's learning in one subject.
- Parents appreciate the fact that their children are coming home buzzing about what they are learning.
- Although the changed timetable does create some problems, students, staff and parents are almost unanimous that the advantages outweigh the disadvantages.

- Teachers have adapted their planning to make use of the longer blocks of teaching time.
- The sciences, arts, PE and technology particularly like the new timetable.
- The longer blocks of time make it much easier to organise any parts of the school programme that require students to go off-site or that take longer than an hour; for example, outdoor education, hospitality, recreation, and Gateway.
- Although the dual enrolment means the school does lose some income, it has not had to reduce staffing because more students have been staying longer.
- Part-time teachers prefer committing to four hours in a day instead of one hour a day over four days.
- Ten adults have enrolled: the blocked teaching time means that, instead of having to leave their other work for a hour on each of four days, they only need to take one day off, or two hours on each of two days.

■ Looking ahead

The school hopes to work out ways of accessing a broader range of programmes at CPIT (Christchurch Polytechnic Institute of Technology). Like the school, CPIT has been active in exploring options and seeking solutions.

The school plans to continue working with other schools in the area to ensure that together they can offer their students the best education possible.

■ Contact

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■ See also

Canterbury Tertiary College and **New Zealand Trade Academy**, both also in this series.

■ From the Education Gazette

Amuri Area School likes their students to take advantage of the trades academy programmes offered by the Canterbury Tertiary College in Christchurch, about 100 kilometres south of the school. The programmes offer students the chance to spend two full days a week in Christchurch doing their multi-trades course. Students are also offered the opportunity to participate in primary industries training every Friday in Christchurch through the National Trades Academy.

In the past, these programmes had run two or three afternoons a week, but this has been changed to allow students more of a chance to participate.

When looking at their own timetable for 2012, school principal Neil Wilkinson said they realised that if things stayed as they were, students attending these courses would miss a lot of other classes. As it was, classes at the school ran as one-hour periods, so if students were out of school for a day, they would miss several periods of other subjects. There was also the issue for other subjects, such as outdoor education, hospitality, recreation, Gateway, and rural skills, where if they wanted to spend a day outside the school, those students would also miss classes and have to catch up.

During 2012, the timetable for Year 11, 12, and 13 students changed. Each morning, students now attend a one-hour period for a subject such as English. Following that, three days a week, the rest of the day is spent in one subject for a four-hour block. The other two days the students attend two two-hour periods.

Neil said they approached staff members who taught senior subjects and asked if they would be prepared to teach their subject in a four-hour block once a week. Some immediate advantages seen with this format of timetabling were that teachers could teach an in-depth class without having to pack up after one hour, and they could go outside the school during their four-hour class if they wanted to. As well as the subjects already mentioned, teachers who taught art, photography, carpentry, chemistry, and physics saw how it could benefit their classes, and teachers of mathematics with statistics, biology, and physical education said they would be prepared to try the new format.

Deputy principal Penny Mossman, who herself teaches a subject in a four-hour block, said while a four-hour class requires careful planning, it allows the students to further explore what they're learning.

"You can do your theory in biology, for example, then go and do the practical, and afterwards you can write it up. To be able to stay in that mindset is really important."

Penny said that while some teachers were a little nervous about changes to the timetable, they realised that if students were to be out of the school for a day, there would be less of a struggle to catch up afterwards.

"I think in their own minds they worked out that this could be the solution to problems they could be having."

Penny said that even in a one-hour period, teachers are aware of the need to have a range of activities to keep their students inspired. To support each other, teachers worked hard on changing their lesson plans and met to talk about best practice and what they found worked best during the four-hour periods.

While the prospect of teaching a four-hour period may have seemed daunting at first, Penny said that after her first one she reflected back on how smoothly it had gone. She said the students were also willing to try something new.

"They're quite accepting of change and realised that we were doing something a bit different."

In August, the new structure was independently reviewed and a number of benefits were found. There was the initial benefit, which was the main agent for change – allowing students to follow their interests without missing classes and having to catch up. As a result of this, Penny said teachers found that they were working through their programmes of work a lot more quickly than in previous years.

"Some teachers had been struggling to complete their programmes, usually due to the interruptions they had from students being away and trying to catch them up again. That was something that dropped out of it."

Another benefit identified in the report was that the school could employ part-time staff for one day a week, which was more attractive to part-time teachers than working one hour a day, spread over four days.

Students participating in the trades and primary industries courses who could have been described as 'at risk' gained their Level 1 NCEA and all picked up considerable Level 2 credits. Fourteen out of 15 Year 12 students gained Level 2.

The new format also provided an opportunity for adult students, another benefit that was not thought of when the new timetable was initially implemented.

At the time of publication, the school had eight adult students enrolled in photography, art, chemistry, carpentry, and hospitality. Neil said that this has really seen the school become a true community place of learning.

The external review sought feedback from parents, students, and teachers, and the end recommendation was to continue with the timetable. One disadvantage to the changes was that if a student had a sick day, they would miss a bulk of their course. Neil said teachers helped to mitigate this with the use of a Learning Management System (LMS) and by providing notes.

This year, the four-hour period timetable format will continue with few changes, in an effort to embed it solidly into the school culture.

"The students like it, and we like it, too," said Penny. "It has meant some changes for planning lessons, but change is not always bad.

"If you want new and different outcomes you have to be prepared to make some quite significant shifts."

Penny said this provides ideal groundwork for their senior students' transition to university or polytechnic, where they may be focused on one subject all day and will have to rely on their own time management skills.

During 2012, Neil said they had two schools visit to see their new system in action, and one is trying it this year for their Year 13 students.

"It seems to us that this structure, if implemented in other schools, would make student participation in things like the Trades Academy far more practical and enable students to mix school and other training."

– Kate Bleasdale

Auckland West Vocational Academy

Massey High School has established a number of vocational academies under the banner of Auckland West Vocational Academy. These operate in a variety of formats depending on the needs of the target students. All students opt into a complete programme of NZC and vocational learning, with tuition shared between MHS, Unitec, MIT and other tertiary providers.

■ Focus

Automotive, Business and Computing, Carpentry, Electrotechnology, Hospitality, Retail, and Engineering.

Levels 2 and 3.

■ Scope

AWVA operates within Massey High School and Waitakere College (for the engineering academy, which is not duplicated at MHS). Massey High School is looking to extend AWVA opportunities to students of other local schools and has designed a new option for 2014 with this in mind.

In 2013, approximately 140 students are enrolled in AWVA academies.

■ Purposes

- To offer clearer, more effective vocational pathways for students who do not intend going on to university
- To equip students with the knowledge, skills and competencies they need for successful employment
- To raise achievement by providing context-based courses that engage students in learning that has meaning and purpose for them.

■ Key features

- There are three full-time academies (electrotechnology, retail, and carpentry) and four part-time academies (automotive, business and computing, hospitality, engineering).
- The full-time academies differ in the way they are structured, but all offer complete courses in association with either Unitec or MIT, supplemented by other providers, over a single year.
- The part-time academies integrate the specialist academy opportunities and relationships with NZC learning, and are delivered over two years.
- Entry is by self-selection or staff identification. "Anyone who might benefit will be given a place."
- Academy students have the opportunity to achieve a tertiary endorsed National Certificate in addition to NCEA level 2.
- Students come from a wide variety of backgrounds. Some are late maturers. Some have very few level 1 credits. Some have come into an academy following a suspension. All are aged 16–17.

- The dean and form teacher continue to be responsible for the pastoral care of students when they are enrolled in an academy.
- Many students choose to remain fully involved in school co-curricular activities: sports, cultural, productions, etc.
- When AWVA was first set up, indicative enrolments were asked for to gauge demand. This was problematic, so the school has now put a much more structured process in place.

■ **Initiated**

MHS has been running a sports academy for a number of years, introduced a dance academy this year and is planning drama and music academies for 2014. These academies are all self-funded and targeted at MHS students.

■ **Drivers**

- The low educational achievement of a significant number of 15–19 year old New Zealand students
- The lack of skills-based educational opportunities for post-compulsory school students
- Principal Bruce Ritchie and other senior staff had observed a number of alternative educational structures in operation overseas that were providing high-quality vocational opportunities
- Encouragement and opportunity from the Ministry to develop flexible delivery models that most suit the students.

■ **Partners**

Massey High School is AWVA lead provider. Partners are Unitec, MIT, Waitakere College.

■ **Programme**

- Each academy is individually structured, but within the same set of philosophical parameters.
- The transitioning aspects of the academy are clearly explained to the students and their families.
- A close professional relationship is maintained with the school's tertiary partners at the delivery level. The students can observe this collaboration in action.
- AWVA tertiary partners attend (and host) student/whānau information evenings and celebrations.
- The school aims to create a tertiary environment for students when at school as well as when with a tertiary partner.
- The schools aims to ensure that each student has a coherent, integrated, and complete learning programme.
- The part-time academies operate in two of the five lines in the timetable. Sometimes students also work through the lunchtime.

- Apart from an hour per subject on each of about 10 days of off-site learning or work placement, students in the part-time academies miss very little of their other school work.

■ **Post-school**

The majority of students who complete their academy learning go on to find related employment or go on to further training at a tertiary institution.

MHS sees four possible successful outcomes from an academy programme:

- Students finish school with a tertiary qualification that helps them find employment.
- Students gain direct entry into a degree or diploma course.
- Students go straight into an apprenticeship.
- Students use their NCEA level 2 achievement as the basis for a different career pathway.

Unitec accepts successful completion of any of the applied technology academies (automotive, electrotechnology, carpentry) as a prerequisite for entry into training/study at level 4.

■ **Other outcomes**

- In 2012, 80% of academy students reached or surpassed NCEA level 2. In carpentry, all students achieved all their level 2 BCAT National Certificate standards and 13 out of 14 achieved NCEA level 2.
- Students have a greater sense of achievement, take pride in what they are learning and have developed a collaborative ethic.
- Attendance is significantly up. At the time of writing, 120 out of 126 academy students were meeting the 80% minimum attendance requirement.
- Student retention has greatly improved. Nearly all students remain. At the time of writing, only two of 126 students had elected to leave their academy.
- Students are doing things they never thought possible; parents and whānau are taking pride in the achievement of their young people:

“One student on work experience from the academy burst into tears in a review, saying that they were the only person in their family who had ever had a job. They now have part-time work, and an offer of full-time work once they complete the academy,” says Principal Bruce Ritchie.

■ **Contact**

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■ Carpentry (full-time)

A one-year programme taught by a full-time tutor in close association with Unitec and two community trusts. Also supported by a number of building related organisations such as Site Safe, and manufacturers such as Ramco and Paslode. Students can gain over 100 level 2–4 credits, achieve BCATs and gain NCEA level 2 with Construction and Infrastructure as their vocational pathway.

Successful completion allows entry into any of the level 4 Allied Trades courses at Unitec.

There is no academic prerequisite for this academy, and many enter it with a chequered school record.

In the course of the year, the students build a 65m² house. To complete this project academy students are expected to work extended hours, some Saturdays, and four extra days in the school holidays.

■ Automotive (part-time)

This is a two-year course. Successful students achieve a level 2 National Certificate in Automotive Engineering in association with MIT, plus an endorsed NCEA level 2.

The course was collaboratively designed by MIT and MHS, but Unitec have also offered their assistance. Students (particularly those in the first year) are transported to MIT when specialist equipment is required or for tuition that is beyond the expertise of the school. A highlight for our first-year students is the building of a minibike, which is theirs to keep.

The programme is delivered in two-hour blocks integrated into the regular school timetable. This arrangement has the advantage of allowing students to study three other conventional school subjects, without excessive disruption from the academy programme.

MHS has established a relationship with an independent car manufacturer that has made its engineering facilities available to students in the programme. Second-year academy students have been offered the factory Chevron racing car as a rebuilding project. Factory mechanics will be responsible for critical areas (engine building and management) but academy students will participate in all aspects, together with the MIT tutors (who, like the MHS teacher, are involved with motorsport).

Massey High School now owns a recreational Chevron, which is kept street legal and used as a teaching resource.

■ Hospitality (extended hours)

We are planning to offer a level 3 National Certificate in Hospitality (Café). The one-year course will run 2–6 pm, two days per week. In addition to the 8 hours per week tuition, a significant work experience component will be included.

The timing means that the students will arrive at AWVA during or at the end of lunchtime (schools in the area share a common lunch hour). In this way, they will be able to pursue their academy learning with minimal adverse impact on their other learning.

This course has been designed in collaboration with Waitakere College and Service IQ.

Its goals are:

1. To meet the needs of the local café hospitality community

2. To offer a (mostly) after-hours option that will encourage students from other local schools to participate in the trades academy initiative
3. To explore a model for further interschool and tertiary collaborations under the Youth Guarantee scheme.

A highlight for the students will be a trip to France in the middle of 2014.

Despite no publicity, there are already more intending applicants for this course than places, some from students in schools that are not yet formally involved in the project.

Canterbury Tertiary College

CTC is a partnership between CPIT, regional tertiary providers, industry and local secondary schools, providing a bridge between school, tertiary providers, industry training organisations, and employers.

■ Focus

Has primarily been on trades and technology, although in 2014 there is a greater commitment to meeting the vocational training needs to a wider range of students through a larger variety of programme areas.

■ Scope

Christchurch and Canterbury region. In 2011, 101 students from 16 schools were enrolled (39 full-time as a result of the earthquake). In 2012, students from 27 schools were enrolled. 2013, 397 students from 30+ schools are enrolled.

■ Key features

- Providers are CPIT (lead), Linwood College, Aranui High School, Southern Institute of Technology.
- Courses run 1–5pm Tuesday, Thursday and Friday or Thursday and Friday 8.30am–3pm.
- Strong partnerships involve iwi, schools, tertiary and industry.
- Students (or their parents) can approach CTC directly about enrolment but the school concerned must endorse any application.
- All students have IEPs.
- Full-time Student Support Advisors monitor conduct and attendance, ensure learning support, liaise with schools and families/whānau.
- Reporting of results to schools, students, families/whānau.

■ Initiated

Proposal in 2010 pre-dated first earthquake.

Established 2011 by CPIT and Linwood College (both submitted proposals to Ministry and were encouraged to work together).

■ Drivers

- Need to develop stronger connections to the community, including schools
- Secondary students need clearer pathways to tertiary and careers
- Young people often not aware of opportunities available at tertiary level
- Considerable numbers of young people enrolling full-time in pre-trade (level 2 and 3) courses when not really ready to leave school or be cut loose from peers.

■ Partners

The CTC Advisory Board comprises the CPIT chief executive, CTC manager, and representatives from schools, Ngāi Tahu, providers, industry, Industry Training Federation, and community.

■ Programmes

The range of programmes offered in 2013 includes:

- Applied Engineering
- Automotive/Autobody
- Business Administration and Computing
- Carpentry
- Civil Skills
- Cookery
- Electrical Engineering
- Hairdressing
- Hospitality
- Introduction to Construction
- Introduction to Trades
- Māori Studies
- Mechanical Engineering
- Plasterboard, Painting and Decorating
- Plumbing and Drainlaying
- Welding and Structural Steel.

Most programmes run two days a week throughout the school year, with breaks for the school holidays. A second intake begins in July – this can be very timely for students who are thinking of giving up on school part-way through the year.

30–40% of the schools involved with CTC run a CTC+ class. On Thursday and Friday all the students in this class are off-site (usually) and engaged with their CTC learning; Monday–Wednesday they are at school pursuing relevant NZC studies.

Other schools take a student-by-student approach, looking for a best-fit alignment between the school timetable and CTC learning, sometimes providing additional support for those who miss part of their school programme when involved at CTC.

Students at schools in the urban Christchurch area generally use public transport to get to and from CTC or another provider. Students from schools in rural or semi-rural areas may be transported by school minibus or a contracted minibus. A CPIT outpost in Amberley provides a limited CTC programme for students in the Hurunui area.

■ Post school

In 2011:

- 85% of CTC students successfully completed their tertiary qualification
- 55% of students continued on to further education
- 32% of students went into apprenticeships/employment.

In 2012:

- 75% of CTC students successfully completed their tertiary qualification
- 55.1% of students continued on to further education
- 35.5% of students went into apprenticeships/employment.

■ Other outcomes

- Students who might otherwise have dropped out are continuing with school because they have purpose/see the point.
- Following CTC, a high proportion of students carry on with their education or going into an apprenticeship or employment.
- Increasing demand for places at CTC.
- Schools are now actively promoting CTC to students and parents in course information, careers programmes, and careers evenings.

Student A had a history of behavioural issues when he enrolled in the Introduction to Trades course. Now thriving in CTC environment – especially enjoys spray painting.

Following Student B's enrolment in the Introduction to Trades course, he developed standout leadership skills, much to the surprise of his parents.

In Carpentry, Student C created a portfolio that was so outstanding his tutor asked if he could use it as an example with other students.

Student D in the Introduction to Trades course has additional learning needs but his time keeping and attendance are excellent and he is now thriving alongside peers in a mainstream class.

Students at the Amberley CTC centre built a playhouse in their Introduction to Trades course and presented it to the Oxford Playcentre.

■ A teacher's view

Challenges have been: splitting EFTs, timetabling, transport.

Benefits have been:

- *Students adapt easily to the dual enrolment regime*
- *Enhanced achievement*
- *High levels of motivation*
- *More informed identification of career pathways*
- *Greater engagement.*

– Ellen Cashion, HOD careers/senior course tutor, Papanui High School

■ Other developments

CTC is currently:

- piloting a programme in the Youth Unit of Christchurch Men's Prison, with a view to introducing a full programme of study in 2014
- piloting a supported learning programme in Hospitality and intends to introduce a full-year programme in 2014
- working with schools to find further and better ways of sharing delivery and using school facilities
- exploring how more programming can be provided in satellite sites, thereby reducing the need for students to come into tertiary sites
- working closely with schools to ensure the best possible alignment of secondary and tertiary programmes
- in negotiation with a PTE to provide service industry sector training for students.

■ See also

Amuri Area School, another example in this series, for how a rural school has worked to overcome the distance barrier and enrol students at CTC.

■ Contact

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■ Linwood College

Full time courses at Linwood College in 2012 included:

Automotive Level 1 (year 11)

Students cover a wide range of automotive maintenance skills and learn to use hand tools and power tools safely and correctly. Theory and practical sessions are over a full year. Assessed for the National Certificate in Motor Industry (Foundation Skills) Level 1.

Building, Construction and Allied Trades Level 1 (year 11)

Students complete a wide variety of high interest projects and learn through linking practical skills to theory over the year. Assessed for the National Certificate in Building, Construction and Allied Trades Level 1.

Mechanical Engineering Technology Level 1 (year 11)

Students complete two major projects and learn how to use a wide variety of engineering hand tools and equipment. Elements of design and sketching are included over the year. Assessed for the National Certificate in Mechanical Engineering Technology Level 1.

Motor Industry Level 2 (year 12)

This course provides trainees with a good knowledge base to move into one of the many occupations within the motor industry. Assessed for the National Certificate in Motor Industry (Entry Skills) Level 2, this two-year National Certificate course is completed over years 12 and

13. Students cover a large number of unit standards from a wide variety of motor trade areas. Two subject blocks required.

Building Construction and Allied Trades Level 2 (year 12)

This one-year course is available to year 12 and 13 students. It covers a wide variety of skills from the building and allied construction industries. Major projects are completed throughout the year and link to theory assignment booklets. Assessed for the National Certificate in Building, Construction and Allied Trades, Level 2. Two subject blocks required.

Mechanical Engineering Level 2 (year 12)

This one-year course enables students to complete requirements for the first year of most engineering apprenticeships. It is available to year 12 and 13 students wanting to enter one of the many engineering trades. Students cover a wide variety of topics and complete many interesting projects. Assessed for the National Certificate in Mechanical Engineering, Level 2

Hauraki Plains College – timetable

Hauraki Plains College moved to an 8-line timetable to gain greater flexibility to meet the learning needs of a wider range of students.

■ Focus

Timetable restructure.

■ Purposes

- To ensure that the school is offering equitable opportunities for all students
- To move beyond the constraints of a typical 6-line senior school timetable
- To give students the opportunity to take more than six courses in the senior school
- To provide for diverse pathways: every senior line includes at least one subject that is appropriate for each of the five pathways.

■ Key features

- The timetable for year 11–13 students is structured in 8 lines, each of 3 one-hour periods.
- The remaining hour is used for assemblies, etc.
- Students can take up to 8 courses instead of 6.
- Assessment requirements per subject are reduced from 24 to 14 credits.
- Because each subject is taught for less time, teachers are able to offer and teach additional courses.
- Because each subject is taught for less time, specialist facilities are freed up for use by additional courses.
- Additional courses offered are designed to engage students who require a vocational pathways programme.
- Links through Gateway and STAR are now much easier to utilise and manage, and seen as part of an integrated approach built on the career management competencies and supported by academic mentoring.
- Strong pathways approach: Students document their learning journey (in a “river log”) and discuss it regularly with their tutor.

■ Initiated

2007. Staff had questions and doubts, but were convinced that this change would be in line with what the new curriculum was asking schools to do, and that it would be right for the students. The board strongly supported the change. Not all parents were happy with the change, particularly those with sons or daughters who were planning on university courses, but within a year or two they were won over by a continuing rise in student achievement. The school reviewed the changed structure and its impact for three years. At this point, it was decided that annual reviews were no longer necessary.

■ Drivers

- The equity principle in the New Zealand Curriculum, 2007 – the school wanted and needed to value the diverse interests and talents of students
- Concern that programming in the senior school was unfairly oriented to the needs of those going to university and put a lesser value on the needs of others
- Student engagement: Needed to find a way of offering a wider variety of subjects and potential vocational pathways
- Desire to legitimise the exploration process: many students aged 15 or 16 do not really know what career direction they want to take, so should not have to prematurely commit wholly to one path
- To create a more flexible system for students so that they can choose as broad a path as possible (if they wish) for as long as possible.

■ Partners

ITOs. Distance makes travel to and from polytechnic campuses impracticable, so the school has worked closely with ITOs to gain accreditation to teach and assess a wide variety of industry-based unit standards.

■ Programme

- All year 11 students take English, mathematics, science and health and physical education. This still leaves them four lines for other courses.
- Some trades-related courses (e.g. Building, Construction and Allied Trades [BCATs]) are now offered in three lines (9 hours per week) at level 2 and in four lines (12 hours per week) in level 3.
- Lines can be split: students have considerable flexibility to choose how much of an additional line they may want or need.
- A student can take more than one vocationally oriented course; for example, agriculture and BCATs.
- Students are strongly encouraged to take a “different” subject in one line (e.g. English, drama, classical studies, music), even if they are on what is primarily an industry-focused pathway.
- The course line-up now includes trades-related courses, LEOTC, forestry, classical studies, and drama, which were previously offered only with difficulty, if at all. Also Māori cultural studies, horticulture, and creative literature.
- A few NZC subjects (e.g. level 2 mathematics and art) are allocated two lines to ensure sufficient time.
- Level 2 students needing to meet specific requirements for entry to particular university courses can take the subject concerned in a second, additional line.
- All students taking a full programme of level 3 achievement standards take five subjects for four hours each (the fourth hour comes from a split line). This gives them four hours of scheduled study time. No other students are allocated study time.
- The goal is for all students to achieve at level 3 as well as level 2, and the students want level 3 credits. But the school has struggled to put in place a sufficiently wide

range of courses (ie a range that includes industry standards) at level 3. This problem is being worked on currently with ITOs.

- As a variation on the 8 x 3 structure, the school has trialled occasional “block learning” weeks in which each day is split into two blocks of 2.5 hours. The idea is to provide an opportunity to do something different or special, and to open students and staff to different ways of learning.

■ Mitigations

Initially, some staff were concerned that moving to an 8-line timetable might increase their workload. This has not turned out to be the case. Some measures that helped:

- Reducing assessment requirements from 24 to 14 credits per subject
- Rationalising and simplifying the reporting cycle
- Reducing the number of staff meetings
- A number of staff are assigned two classes at the same level.

■ Post-school

Of the 147 leavers in 2013, four could not be traced, one was unemployed, and one had become a parent. The remaining 141 had all gone on to further education or training or were in full-time employment.

The percentage of students going on to university has increased.

■ Other outcomes

- The engagement and focus of students at levels 2 and 3 is much greater than before.
- Greater buy-in from students, who appreciate the opportunity to build a programme that meets their personal needs.
- Students have a stronger sense that their school-based learning relates to their chosen vocational pathway.
- Because the system allows for so many permutations, industry-focused programmes appear as business-as-usual instead of add-ons. Students and the community like this.
- Students like the fact that they can explore a pathway without prematurely closing off other options.
- Teachers are increasingly putting course information and class forums online so that students who are sick or on Gateway can keep up with their work.
- In years 9 and 10, the 8-line structure allows for equitable coverage of the 8 essential learning areas.

■ Contact

Ngairé Harris, Principal, phone 07 867 7029, email principal@haurakiplains.school.nz

New Zealand Trade Academy

The NZTA is a virtual school, linking schools, ITOs, and employers to provide pathways into careers in the primary industries. Students do much of their industry-related learning at school, but participate in a schedule of site visits designed to expand their vocational imagination, and, in years 12 and 13, spend time each week in site placements.

■ Focus

Principally agriculture, horticulture, forestry, and other primary industries.

■ Scope

National coverage. 22 schools, 390 funded places; oversubscribed.

■ Key features

- School-based model, managed by ITOs
- Year 11 field visits, year 12 and 13 industry placements
- 'Try before you buy' approach
- Career education support for the schools involved
- One-to-one support and guidance for students involved.

■ Drivers

- Difficulty in recruiting young people into industry, lack of entry points
- Existing providers not delivering the required skills
- Need for broader training, including 'soft' skills and preproduction industry training
- Need for visible career paths
- Desire to reduce non-productive and risky on-site training
- Lift industry profile with parents, teachers, and other stakeholders.

■ Initiated

By primary sector ITOs. First intake 2011 (8 schools and 120 funded places).

■ Partners

Primary industry ITO, schools, employers.

■ Programmes

In year 11, students are in school for four days a week and engaged in site visits for one day. They study NZC subjects (such as English, science and mathematics) and are assessed for NCEA level 1 (80 credits). They also take a number of modules relating to the National Certificate in Primary Industry, and are assessed for another 40 credits. The site visits are designed to introduce them to a wide variety of agricultural, horticultural and forestry businesses and careers so that they are able to gain a sense of possible direction.

In year 12, they continue with their NZC subjects (again, these are assessed for 80 level 2 credits) but are now in site placements one day a week. They select an industry focus (agriculture, horticulture, or forestry) and begin industry-specific studies, which are assessed for 30–40 level 2 credits towards national certificate.

In year 13, they continue with their NZC subjects at level 3 plus their industry-specific (national certificate) subjects (level 2 or 3). They also continue with on-site placements for two days a week.

Different schools find different ways of running their NZTA programme, depending on needs and circumstances. For example, some isolated schools run a weeklong “camp” during which students embark on a road trip, visiting a number of different industries. A number of schools find that a double line in the timetable gives them the flexibility (particularly when aggregated with lunch and/or after-school time) to schedule site visits or training in such a way that they don’t undermine the students’ other learning. Youth Guarantee funding is also used by schools in different ways, depending in part on the barriers to learning that confront their students.

■ **Post-school**

With the assistance of the ITO, students take up employment/a modern apprenticeship in their chosen industry or they go on to further studies at polytech or university.

■ **Outcomes**

- Students are able to focus on preparing for a career while still at school.
- Students gain transferable skills through on-the-job learning.
- Students are able to transition smoothly from school to industry.
- Industry gains highly employable workers.

■ **A teacher’s view**

“This is absolutely the most amazing course.

“We are lucky to have been able to join the Trade Academy Programme. We are able to offer students a well funded and well resourced course which gives practical, hand on learning for students.

“They are able to pursue an interest in Primary Industry and gain meaningful credits towards their qualifications as they do so.

“They are able to get a taste of success, form clear career paths and a plan of how to get there.

“The support the students and school receive from the Primary ITO is second to none and we are able to access resources written for the industry by the industry.”

– Sarah Foley-Smith, Geraldine High School, quoted in *Straight Furrow*

■ **Contact**

Derek McCullum, School Liaison Manager: derek.mccullum@primaryito.ac.nz

■ Geraldine High School

Teacher Sarah Foley-Smith says that most of her students struggle with their other schoolwork, but this programme really focuses their attention and energy – so much so that they are happy to work through lunchtimes and to turn up at weekends for the ATV/fencing/tractors module provided by a contractor: “The students are passionate, interested.” Because their academy work so engages them, it is a key to their success in NCEA level 1, including their literacy credits.

The school keeps numbers in its academy classes to around 10 so that all students can be fully involved in the large practical component, at school and on the many site visits. In year 12, numbers in the programme tend to be fewer than this because some of the previous year’s students leave for good jobs, mostly modern apprenticeships.

The programme is firmly situated in the local community. This keeps travel to a minimum, uses local resources, and strengthens relationships with local businesses and ITO contacts. These relationships are crucial for site visits and placements and, ultimately, offers of employment.

Not including site visits or placements, the programme occupies one line (four hours) of a six-line timetable. The school believes this is a good approach for students in that it opens up their horizons but does not require them to burn any bridges by committing wholly to a particular career direction at an age when they are largely unaware of their options.

Sarah works part-time, and only with students in the academy, so she is able to arrange site visits in such a way that they are a good fit for the students’ wider programme and the sites themselves, without needing to arrange cover for her other classes. Flexibility is a feature of the programme. Its emphasis changes each year in response to student interests. “And if something interesting comes up, we go and do it.”

Other teachers are strongly supportive of the academy so do not make an issue of students being out of their classes for site visits.

Sarah says the funding that academy enrolments bring with them is vital. It is used to pay for transport, specialised equipment, contractors who provide training for specialist modules, a teacher’s aide who provides additional literacy and numeracy support ...

Each February, Sarah holds an information evening for students and parents, with principal, dean, and NZTA and ITO representatives. As from next year, all applicants will be interviewed with their parents. Principal Juliette Hayes and Sarah are currently working on a strategic plan designed to further increase awareness of the academy and position it as an excellent pathway to careers in the primary industries.

The academy has gone down well in Geraldine: “The whole community has really got behind it,” says Sarah. The community is pleased that there is now real encouragement for young people to go into agriculture, horticulture and forestry, and clear pathways for them to do so: “This has been the most amazing course for raising the profile of the primary industries.”

■ Tauhara College

At Tauhara College in Taupo, the year 11 level 1 academy programme is sold to students as an introduction to all the primary industries. A schedule of field trips takes them to dairy and forestry industries around the Taupo region and as far away as Tauranga for horticultural industries. By the end of the year they have a very good idea of the opportunities “out there”, and the kinds of skills and knowledge that are in demand. At the same time, their school-

based learning – a balance of theory and practice – is assessed for approximately 40 credits of mostly industry-related unit standards. The programme occupies two lines of a 5-line timetable.

In year 12, academy students are encouraged to focus on the industry sector that is of most interest to them, plus they spend one day a week in an industry placement. The level 2 programme occupies only one line of the timetable, but teacher Kate Callaghan would like to see it increased to two.

There is currently no year 13 programme.

Kate says that her principal, Peter Gould, and her colleagues have been strongly supportive of the academy. For example, she had no trouble getting the double periods that she finds necessary. Not only do they make much practical learning more viable, they reduce the impact of site visits on the rest of the students' programmes.

Year 11 students look forward to the full-day placement in year 12: "It's incredibly valuable." Often these placements are the crucial link in the chain that sees students gain full-time employment.

Kate would like to see a school-based year 13 programme offered, particularly for those who want to go onto tertiary studies, but she believes that ITOs have a strong preference for level 3 learning to be located in industry. The absence of such a programme may be one reason why quite a few year 12 students are "thinking out" by the time they turn 16.

Like Sarah at Geraldine High School, Kate has a lot of first-hand experience of farming (and forestry and horticulture). There is not much that she is not able to turn her hand to. Teacher knowledge is crucial, she says, and she would like to see ITOs doing more to professionally develop teachers who are thrust into similar roles without a background in primary industry.

Kate also sees funding as very important. This year her level 1 programme started with 26 students, of which 16 were funded through Youth Guarantee; the eight students in her level 2 programme were all funded. It is this funding that makes the transport possible, allows for the purchase of specialised equipment (e.g. electric fencing units), and bringing in outside trainers as needed (particularly to meet OSH requirements).

"It's a really good programme," she says, "we just want to keep making it better."

Otago College Health Science Academy

This initiative is designed to provide an excellent, academically focused programme that prepares Pasifika students for tertiary study and entry into health science careers. The expectation is that all students will gain entry into a university programme that leads to a health profession. A unique feature of the academy is the partnership with the Pasifika Medical Association (PMA).

■ Focus

Sciences, health sciences for highly motivated Pasifika students with parental and/or whānau/aiga support.

■ Scope

One of three health science academies in South Auckland. Those at Tangaroa College and James Cook High School target both Pasifika and Māori students.

There are now 70 students in the Otago HSA, across years 11–13.

■ Purposes

- To ensure a supply of Pacific school leavers with a strong background in science
- To encourage Pacific students into health science professions
- To encourage and inspire all students, including Maori, to participate and achieve in science
- To build relationships between academy students, their families, the PMA, the school and other key stakeholders in the health professions to guide student career choice and achievement.

■ Key features

- Heavily science-oriented (year 10 science achievement a key basis for selection)
- Entry by application and interview (student and parents), to ascertain aspirations and motivation
- A highly demanding academic programme, plus very high expectations on students
- Significant parental commitment (for example, they undertake to come to all meetings)
- Programme of science field trips, workplace visits, work shadowing
- Commitments may involve before and after school, weekends, holidays
- Students given stationery, personalised homework diary, netbook, graphic calculator, science textbooks and workbooks and lockers
- Parents are kept very closely informed about what is happening and how their son or daughter is achieving
- The partnership with the Pasifika Medical Association, which initiated and funds the academy and provides ongoing support in every possible way.

■ **Initiated**

2010 proposal presented.

2011 first cohort of 25 selected from the 100 interviewed applicants.

■ **Drivers**

The academy was an initiative of the Pasifika Medical Association to prepare Otahuhu College Pacific students to successfully enter and complete science degrees and become Pacific health professionals. Specific drivers included:

- A shortage of Pacific health professionals in the New Zealand health workforce
- An increasing Pacific population, with a large percentage of young people
- High rates of Pacific unemployment and poor educational achievement
- A shortage of Pacific young people entering tertiary study and, in particular, health science pathways
- The need to attract into and retain graduates in priority health science professions
- The need to improve the capacity and capability of the Pasifika health workforce.

■ **Partners**

The Pasifika Medical Association (PMA), which funds the academy and delivers non-curriculum aspects of the programme. The PMA provides support to parents of academy students (information evenings); support for students with study and examination skills workshops; academic mentoring, support for science teachers in the form of resources (e.g. brain, eye models, torsos, etc.) to facilitate inspirational science teaching and learning, support for careers advisors in developing resources on career pathways, career shadowing, and work placements.

■ **Programme**

An academically intensive curriculum and programme of study consisting of achievement standards and external assessments:

- Year 11 – two sciences, English, mathematics, and two other subjects
- Year 12 – physics, chemistry, biology, English, mathematics and one other subject
- Year 13 – science subjects, mathematics (calculus or statistics), and a “writing” subject (most often English).

In year 13, students select a health profession (for example, sports physiotherapist, dietician, nurse or optometrist) and choose their subjects accordingly.

Academy students stay together for all science (except electives) in year 11 and meet every day for 20 minutes tutor time with their tutor teacher, who is also their Health Science Academy teacher. They also participate in weekly tutorials and holiday study skills and exam preparation workshops.

Field trips for science, biology, chemistry and physics take place throughout the year.

Health science field trips are also scheduled to places such as Middlemore Hospital, the Liggins Institute, and the University of Auckland, where they meet medical professionals,

carry out science laboratory work, and attend lectures. Thanks to the PMA the academy has strong connections with real Pacific Healthcare Heroes and workplaces.

■ Outcomes

With the academy now only in its third year of operation, no cohort has yet graduated from school, so there is no end-point data. The evidence strongly suggests however, that the project is on target to achieve its aims. Certainly, its many stakeholders (including PMA, students, whānau/aiga, and community) already deem it hugely successful. Participation by and achievement of Pacific students in science has increased very significantly and all year 13 students are on track to enter tertiary study at degree level in 2014.

The Pasifika Medical Association analysed the achievement (2012) of students in the 13 externally assessed science achievement standards taken by academy students across two years:

- Year 11 academy students had a 90.4% pass rate for NCEA Level 1. They outperformed all groups in 5 out of 10 science standards and equalled or outperformed the national rate for the remaining 5 standards.
- Year 12 academy students had a 86% pass rate for NCEA level 2. They outperformed all students in 7 out of 14 standards and the national rate for Pacific students in 12 out of 14 standards.

■ Other outcomes

- A marked increase in the number of Pasifika students taking science at Otahuhu College.
- The school now has two classes in each of chemistry, physics and biology in years 12 and 13:
 - In 2010 there were 4 Pacific students taking level 3 physics; there are now 20
 - In 2010 there were 7 Pacific students taking level 3 chemistry; there are now 24
 - In 2010 there were 7 Pacific students taking level 3 biology; there are now 26.
- Three of the four head students in 2013 are members of the HAS, as is the student representative on the Board of Trustees.
- Two parents of students in the first cohort are now Board of Trustees members.
- Parents understand what support is required for their son or daughter to succeed.
- A strong partnership has been established with the Pacific health professional sector.
- Retention rates in the academy are very high: students rarely withdraw except to leave the area.
- Academy students (and their peers) realise that they can achieve whatever they want to if they put their shoulder to the wheel.

■ The Pasifika Medical Association

The Pasifika Medical Association (PMA) has been working to strengthen the Pacific health workforce capacity and capability since its establishment in 1996. Other workforce development programmes run by the Association include *Healthcare Heroes* and *Students Are Our Future*. The

Association quickly recognised that visiting schools to tell them about employment opportunities in health care was not sufficient to get real results and more employment by Pacific people in health.

The Association explored alternative models of health workforce development (including a visit to the USA). The Otahuhu College Health Science Academy concept grew from observations gained during this American visit and an extensive literature review of international models. Some American workforce development initiatives target specific students at an early age to be mentored through their education into specific health care employment.

From its inception, the purpose of the Academy has been to provide additional vocationally oriented support for Pasifika students wishing to pursue a career in health science to enable them to successfully enter tertiary study.

The PMA has clear goals and is uncompromising in its commitment to achieving them. It wants real results and real improvements for young people, more Pacific people working as health professionals, higher achievement amongst Pacific youth, an increase in Pacific enrolments in science and health science programmes and more Pacific young people employed.

PMA CEO Debbie Sorensen says the Health Science Academy programme takes a positive, strengths-based, aspirational approach. Members are very focussed and involved in their community. Regular engagement promotes positive discussion about the opportunities and the ease with which achievements can be made.

Sorensen is strong in her belief that in the face of anything that might be labelled a 'barrier' they 'will overcome it', and 'can do it'. She cites a recent example, where there was a problem for students to get to a holiday workshop. No one had thought who would pay for the bus. The Association's approach to problems like this is 'fix them!' Sorensen says these are the problems that the teachers and students shouldn't need to worry about. Teenagers worry about things like this ... they might worry, 'can my mum afford to pay for the bus?' In this instance, a bus was organised, the Association paid for it and provided all students with lunch as well!

The PMA has invested heavily in evaluation of the Academy. They have a high degree of accountability to their Board, the health professionals who fund them and to Pacific communities. They have baseline data on Pasifika participation and achievement in science at Otahuhu College. For the Association, evaluation is an important part to the programme's success.

The Pasifika Medical Association has the network to mentor and maintain the relationship with Health Science Academy students as they transition into tertiary and the workforce. One way it plans to maintain the relationship is through the 107 trained and accredited mentors it has at 20 tertiary institutions around the country. These mentors work on a workforce development programme called Students Are Our Future. Two mentors work with five or six students with a focus on academic achievement. It is likely many Academy graduates will participate in this mentoring process.

Once in the workforce, graduates will become members of the wider Pasifika Medical Association network. The Association currently has more than 3000 members working as health professionals in New Zealand and across the Pacific. One of its key priorities is to strengthen effective relationships amongst organisations and stakeholders. The Association does this, for example, through organising conferences, a bi-monthly newsletter (*Pacific's Health Drum*), and the Pacific Health Professionals Organisations <www.pacifichealth.org.nz> (PHPO) group.

– Adapted from Ministry of Education case study by Rika Milne

Papakura HS Health and Sports Science Academy

The Papakura High School Health and Sports Science Academy (HASSA) prepares Māori and other students for study at tertiary level and entry into health-related careers. Effectively a full-time programme, virtually all learning is integrated around health/sports themes.

■ Focus

Science, health and physical education, mathematics, English.

■ Scope

Papakura High School.

Currently a two-year programme (years 11 and 12), with planning proceeding for a third year to be added in 2014.

■ Purposes

- To engage students in learning that they see has purpose (Social and Community Services pathway)
- To empower students with skills for life-long learning, personal confidence, and improved well-being.

■ Key features

- Clear vision and purpose: everyone involved understands the objectives and how they will be achieved
- Self-selected cohort of 25 students at each level
- Each cohort comprises a range of academic ability and ethnicity
- Marketed for students who are interested in a career in the social and community services area and who would like to learn in a structured environment with fewer distractions
- Whānau concept: except for their one elective, students stay together for all their learning
- Very high levels of mutual support, and teacher support
- An emphasis on “daring to dream” encourages students to challenge whatever limits or limitations they encounter
- The two HASSA cohorts contain a wide range of abilities, offering plenty of opportunity for peer teaching (in this way modelling ako, one of the school’s core values, and tuakana teina)
- While given a strongly health/sports focus, the subject mix is broadly useful and leaves open a wide range of career possibilities
- Academy staff have developed a highly collaborative, capable, and optimistic team-teaching culture
- Academy staff invest a lot of energy and enthusiasm in the students and the programme; their reward is seeing the students respond so positively and achieve

- Academy staff have adopted a flexible, problem-solving approach to this shared delivery model
- The academy programme is not set up to prepare students for entry into medicine.

■ **Initiated**

2011 proposals finalised and marketed to year 10 students

2012 first cohort of 25 year 11 students accepted into programme.

■ **Drivers**

- Low levels of engagement and achievement in many current programmes
- The Vocational Pathways initiative
- Students' interests and abilities indicated that a programme focused on social and community services would be welcome
- The Counties-Manukau DHB approached the school, suggesting that the school set up a health sciences academy to prepare Māori learners for future health services careers in South Auckland

After deliberation, the school decided it would proceed with an academy but base it on a different model: its academy would be open to all interested students and include a sports dimension. In the event, approximately two-thirds of the students in the academy are Māori.

■ **Partners**

No formal partners.

Although not a CMDHB academy, the school uses some of the DHB's programmes, and a DHB mentor visits every two weeks.

Youthline is supporting the level 2 class to set up a functioning and effective health council in response to achievement standard 91237: *Take action to enhance an aspect of people's well-being within the school or wider community.*

Sport NZ is supportive of the academy, and students are involved in the Sport in Education project.

■ **Programme**

- Currently a two-year programme: NCEA level 1 (full-time course) and level 2 (full-time course except for one elective of 5 hours). Planning is proceeding for a level 3 course to be added in 2014.
- Strong emphasis on educational achievement, learning how to learn, experiencing success.
- Mathematics and English knowledge and skills, which are crucial for social and community services careers, are an important part of the programme. In mathematics, the emphasis is on statistics. English is allocated 5 hours per week so that students can complete a full (rather than basic) course.
- The course provides many natural opportunities for key competency development.

- Where possible, learning is arranged around themes/contexts.
- By recognising the considerable overlap between human biology (science) and sport (physical education and health), teachers are able to avoid duplication of time and effort when teaching content and skills, in this way freeing up time that can then be used to go deeper. (For example, students may give a speech on diabetes [English], having learnt about diabetes in human biology. This means that the focus of their speech preparation is on speaking [as it should be], not content.)
- Teachers of the different subjects plan collaboratively to integrate their teaching. Once the basics are in place, this collaboration is most often informal (important for minimising time spent in meetings).
- Each subject is assessed for at least 14 credits. Care is taken to ensure that students will be able to meet university entrance requirements and, potentially, gain endorsements.
- Students visit health-related industries and centres such as the Liggins Institute. Gateway funding supports health-related work experience placements.
- The academy is able to access Counties-Manukau DHB support programmes including mentoring, the University of Auckland Whakapiki Ake Project (which encourages young Māori to enter health careers) and the University of Auckland's Māori and Pacific Admission Scheme (MAPAS).

■ Post-school

The academy's target is 30% of graduates to university, 60% to other further education, and 10% direct to work.

Now in its second year of operation, no cohort has yet graduated from school, so there is no end-point data. The evidence strongly suggests however, that the project is on track to achieve its aims.

In 2012, students who previously may not have expected to gain NCEA level 1 achieved outstanding results:

- Two gained excellence endorsements and three gained merit endorsements.
- In health and physical education, nine students gained merit and two gained excellence.
- In science, two gained merit and one gained excellence.
- In English, one gained merit.

Attendance of academy students is significantly higher than that of their year groups: for year 11, 84.0% compared with 78.4% and for year 12, 85.9% compared with 79.5%.

■ Other outcomes

- Academy students have found the course hard, but take pride in the fact that they are succeeding and achieving in ways they had hardly thought possible.
- The homeroom environment promotes a culture with strong learning bonds and high levels of mutual support.
- Some students are happy to work through lunchtimes and after school, and to attend homework sessions and homework club.

- Holiday study programmes operate for the students, in school and through outside providers.
- Students greatly value the fact that their teachers know them as individuals and understand their capacities perhaps even better than themselves.

■ Looking ahead

As they plan for the introduction of a level 3 programme in 2014, staff are aware of the need to begin dismantling some of the scaffolding they have put in place so that the students are able to effectively make the transition to tertiary education. They intend making the environment as much like a tertiary learning environment as possible. This will mean, for example, introducing students to lecture-style learning where they listen and take notes and save their questions for the end. It may also mean seminars.

Staff also want to promote greater parent engagement. The turnout of 70 to the diabetes speech night showed that, with encouragement, parents are willing to get involved.

■ See also

<http://youthguarantee.net.nz/vocational-pathways/education-providers-/papakura-examples/>

■ Contact

Peter Heron, Principal, phone 09 296 4400 ext 705, email principal@papakurahigh.school.nz

■ Student perspectives

According to student feedback, the things that make HASSA an effective learning environment include the following.

The whānau focus and support of teachers:

- Being home-roomed for several core classes is a plus.
- Teachers are positive and encouraging; relationships with them are excellent.

The mutual support:

- Because HASSA students have shared interests they are able to assist each other with their learning: “People who can do things help those who are struggling”.
- Students often meet in a study period after school to work together.

The focus on mentoring:

- Being a buddy for a year 11 student means “everyone’s a leader”.

The achievement-oriented class culture:

- HASSA members know and support each other’s learning and career goals: “we push each other up”.
- Students believe they are demonstrating school values: “Strive for excellence is a school value”.

Assessment tracking:

- A tracking board enables students to keep track of their credits. They value this evidence of progress.

The pathways focus:

- Students see their HASSA programme as connected to their career interests and believe that they are getting good information about career pathways.
- Teachers have shown them how they can work towards tertiary foundation courses that include subjects like anatomy.

Double periods:

- Double periods for health, English and science support in-depth learning.

The themed units:

- The themes are interesting and relevant in terms of career and personal interests.
- Cross-curricular and in-depth learning gives students a more holistic appreciation of concepts: *"I am bad at maths, but the science and health helped me get the maths"*.
- The contexts could be used for assessments in different subjects; for example, students used information about the effects of diabetes (science) when preparing for a speech night (English).

School of Secondary–Tertiary Studies

A collaboration between Manukau Institute of Technology (MIT) and a consortium of Counties Manukau secondary schools aims to provide a seamless pathway from year 11 to tertiary education for students who need new purpose and clear direction. Also known as the Tertiary High School.

■ Focus

Students study towards NCEA at the same time as they begin studies for a trade or other career.

■ Scope

All schools in the Auckland region can dual enrol students with the SSTS. The enrolment process begins when the school becomes concerned that a year 10 student is at serious risk of disengaging and achieving few or no credits in NCEA. The school's considered assessment is that the student will gain little if they remain at the school.

After a careful process involving parents and caregivers, the school, the student, and MIT, the student is offered a place in the programme.

■ Key features

- For “students who are finding the secondary school environment isn't right for them” and who would like to “continue their education in diverse, innovative and exciting surroundings” with goals that include NCEA, career and technical qualifications and employment.
- A four-year programme.
- Located in a purpose-built facility at MIT's Otara campus.
- The school recommends students for enrolment or parents can ask school to endorse an application.
- Students are selected mainly from year 10; a smaller number of enrolments are accepted from years 11–13. Students entering the programme are typically 14–16 years of age.
- Students complete their secondary schooling (which can be up to NCEA Level 3) at MIT's Otara campus but remain enrolled at school and can continue to take part in school activities.
- As well as working towards NCEA, students can simultaneously work towards a vocational/technical qualification. This might be a two-year industry recognised qualification or a pathway into a degree programme.
- The programme is based around a holistic approach to education: personal pathway plans, supplemental instruction, supported by the resources of a large institute of technology.
- A high level of academic advice and pastoral support is provided.
- The Tertiary High School is at this stage the only programme of its kind in New Zealand.

■ **Initiated**

In 2010.

Changes made to the Education Act in 2010 as a result of this programme have made it easier to set up trades academies and other joint secondary–tertiary programmes.

■ **Drivers**

- The levels of disengagement and low educational achievement in the school system clearly show that, for some students, alternative pathways are required.

The THS confirms this, with students considered unlikely to succeed in a school achieving to a high standard in NCEA (NZQA reports 85% at Level 1, 96% at Level 2 and 100% at Level 3) and technical and vocational qualifications, then progressing to employment or further training.

- International evidence demonstrates that students respond positively to earlier access to career and technical/vocational education and training.
- Multiple pathways is a philosophic construct which challenges the one-size-fits-all education system.

■ **Partners**

Since the inception of the THS, 28 schools have contributed students to the programme. In any given year it will have students from approximately 25 schools of all deciles.

Dual enrolment at school and MIT means students can continue to enjoy cultural and sporting activities at their school if they wish (a small proportion do) or return to school. It is central to the philosophic basis of the programme that the students are “finishing their schooling” as well as moving seamlessly into a tertiary programme and onto employment or further training.

They are not removed from school – they remain “in” but not “at” school.

■ **Programmes**

Programmes include:

- 30 hours of instruction per week
- English, mathematics, technology, humanities and a range of other secondary school subjects for NCEA levels 1–3
- MIT Certificate in Pathways to Tertiary Studies 1–3, leading to MIT and/or national qualifications
- Elective courses cover such areas as automotive engineering, building and construction, business, culinary and hospitality, early childhood education, electrical engineering, horticulture, information technology, nursing, sport and recreation, visual and performing arts
- Personal development, pastoral care, personal pathway plan, career counselling
- Employment skills such as goal setting, planning, self-management, teamwork, and interpersonal skills.

■ Post SSTS

Students proceed along different pathways. Next steps can include:

- a wide range of certificate and diploma qualifications (with NCEA Level 2 being achieved along the way)
- NCEA Level 3 (+ University Entrance) and then further study up to degree level
- apprenticeships and employment.

Other positive exits can include returning to school, moving to another education provider (e.g. a PTE), leaving for employment. Some students move to another country (usually Australia).

A small number of students who have passed a critical point in the disengagement process prior to arriving at the THS do not respond to the programme.

■ Outcomes

The outcomes for students are measured in educational success, both NCEA and other qualifications. Employment is also a critical outcome.

■ Further information

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■ Snapshots

Rickee, 19, became one of the school's foundation pupils in 2010 and after two and a half years of study successfully completed NCEA levels one to three.

"After so long away from school the first couple of weeks were terrifying. But the teachers were always hands on and it was almost like having a private tutor," Rickee says.

Rickee is now studying towards a Bachelor of Arts at the University of Auckland and aims to cross credit his papers into a law degree which he will pick up in 2014.

Deon, 16, was struggling at secondary school. He would go to class, sit at the back of the room and switch off.

His lack of engagement meant he was failing and his parents, believing he was on a dead-end path, looked to Tertiary High School as an alternative for their son.

The decision turned Deon's life around and he is now positive about education.

"They treat us like we are adults. The teachers really care about what happens to us. I stopped mucking around and started thinking about where I want to end up," Deon says.

Following a year of study, Deon has enrolled in MIT's Certificate in Motorsport and plans a career as a mechanic.

Sione, 17, another Tertiary High School foundation student, completed his third and final year in 2012. This year, he will embark on a two year Diploma in Architecture, and eventually he wishes to study for his Bachelors degree.

At mainstream school, he didn't have a good relationship with the teachers and found it difficult being constantly told what to do.

"Here we have more freedom and trust. There is no uniform, we can leave campus at lunchtime and we are trusted to get back to class on time. If we don't there are consequences, but we are not treated like kids."

Aaron, 16, was on the verge of being excluded from his high school, when his mother began investigating alternatives for him.

"She heard how they run things here and thought it might work for me. I love it and the teachers are all really good people," he says.

This year Aaron will leave Tertiary High School to study towards a Certificate in Sport and Recreation at MIT. He aims to become a personal trainer.

Tairawhiti Schools Trades Academy @ EIT

A developing partnership between Tairawhiti secondary schools – some of the most isolated schools in the country – and the Eastern Institute of Technology (EIT) is offering students a range of learning opportunities and broadening career horizons in ways that were not formerly possible.

■ Focus

Trades, automotive, hair and beauty services, hospitality, carpentry, sport and recreation, agriculture.

Year 12.

■ Scope

A level 2 programme for students from Tairawhiti schools as far north as Te Araroa

A small number of level 1 and level 3 students also participate

135 enrolled students in 2013

All 11 schools/kura in the area are participating.

■ Purposes

- To engage students in learning that they see has purpose
- To widen the range of learning programmes that students have access to
- To lift the employment horizons of students and kick start their career
- To give students the chance to explore possible vocational pathways and, if necessary, change them
- To give students a taste of tertiary education and encourage them to see tertiary studies as an appropriate next step after school
- To promote the profile of EIT among young people in the region.

■ Key features

- A high proportion of academy enrolments are priority learners.
- Students can apply to enrol or be recommended by parents or the school.
- Applications must have the support of student, parents, and school.
- For some students, a lot of travel is involved – up to almost 200km each way over less-than-ideal roads. This means a 12-hour day beginning at 5am.

■ **Initiated**

Small-scale trial with two schools in 2009.

Selected as provider in 2010. Proposals put on hold in 2011 while EIT and Tairāwhiti Polytechnic finalised their merger.

EIT convened a hui at Lytton High School to discuss the concept of a trades academy for the students of schools in the Gisborne region. 10 of the 11 secondary schools, area schools and kura in the region participated.

Inaugural cohort 2012. The Ministry originally allocated 50 places but the response from Ngāti Porou communities and schools was such that this was increased to 105.

■ **Drivers**

- Disengagement of students who don't see much point in subject learning that doesn't have a meaningful context
- The isolation of many of the schools in the region and, therefore, the limited range of options that they are able to offer their students
- Lack of awareness about vocational pathways, with consequent lack of focus
- The need to ensure that more students see tertiary training as a viable and appropriate next step
- Some schools finding it impossible to recruit specialist staff for technology, etc.

■ **Partners**

Lead provider: EIT. All schools in Tairāwhiti region.

ITOs, local business and service organisations.

■ **Particular challenges/issues**

Reliability of internet, winter road conditions, conflicting school events.

When seasonal activities such as lambing or crutching are on, students can be pressured to withdraw from education and take up the part-time work opportunities that become available.

School duty of care: What does this mean during travel, if bus missed, student gets sick when away in Gisborne ...?

■ **Programme**

- Students go into the EIT campus in Gisborne each Friday.
- Schools arrange their timetables so that all other parts of the students' programmes are completed Monday–Thursday. Also for inter-school activities.
- All academy programmes provide pathways into tertiary training.

The integrated trades skills course is one-third carpentry, one-third mechanical engineering, and one-third automotive assembly. For the carpentry, the students work on a small building such as a playhouse or shed. For the latter part of the programme they create a mini motorbike that is then raced at Manfield as part of the New Zealand secondary schools' national minibike competition.

To offer the automotive programme, EIT formed a partnership with Hastings and Gisborne Honda to provide projects for the students. Farm bikes that require a manageable amount of repair are sourced and students dismantle, fix, and reassemble them. Honda also supplies the parts and some supervision, and sells the repaired bikes for EIT.

Where possible, students in the year long carpentry programme work on community projects. This year, one significant project has been renovating the Operatic Society building in Gisborne. The Historic Places Act protects aspects of this building, including the frontage. Academy students water-blasted, sanded, repaired, and painted the woodwork on the frontage. They also replaced some of the mouldings and repaired leaks in the roof. The Gisborne Cadet Unit (which leases the building) and the Masonic Lodge (owners of the building) supplied materials.

All academy programmes are designed to be as practical and as engaging as possible. Students are assessed against ITO unit standards.

■ Post-school

The academy is only in its second year of operation, so outcomes data is limited. But of the 245 students enrolled at EIT's two campuses (Tairāwhiti and Hawkes Bay) in 2012:

- 201 completed their course of study.
- 80% achieved NCEA level 2 or higher.

The students gained 73% of the available credits.

In Tairāwhiti, there was no variation between the achievement of Māori and Pākehā and no clear correlation between school decile and student achievement. There was, however, wide variation in the achievement of students from different schools. Overall, boys did better than girls and ethnicity was not a factor in students withdrawing.

■ Other outcomes

- Academy enrolment helps students mature (as they mix with others, learn in an attractive and more adult environment)
- Improved attendance on regular school days
- Improved personal presentation
- Schools are finding that students who were formerly struggling to engage are returning to school with greater pride in themselves, increased motivation, and an increased willingness to give back to their school community
- Some students who had been thinking of leaving school during or at the end of year 12 now choosing to return for year 13.

■ What next?

Schools in the area are asking for more academy places to be made available, and for improved transport options (some students are walking considerable distances because their regular school bus does not get them to school in time to link up with the academy bus).

Schools are yet to properly integrate the academy and non-academy parts of their students' programmes. For this reason, schools, tertiary providers and Ministry Youth Guarantee personnel are currently engaged in discussions about how to provide a coherent, integrated

programme that addresses key competencies, other curriculum (English, mathematics, science) learning, discipline knowledge and industry-related knowledge. EIT is taking an active part in these explorations, all the time aware that what is best in one school may not be best in another.

Schools want to offer level 3 courses but often the industry unit standards are not amenable to inclusion in a school-based curriculum.

■ Contact

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■ Tolaga Bay Area school

Tolaga Bay area school has 36 students in year 12 and year 13, 28 of these students attend the academy. Principal Nori Parata says:

The academy has both educational and social benefits for our students. We would never be able to offer the choices on site that are available at the academy.

The students are keen to go to the academy. It gives them a feeling of being grown up and adds to their level of maturity.

It's a good transition between secondary and tertiary in a supportive environment. Ngati Porou schools on the coast made a commitment to support EIT in this initiative so all students now go to the EIT Schools Trades Academy.

90% of our students go on to tertiary pathways or employment. A large number of our students went onto EIT Hawkes Bay last year, as they felt more familiar with this tertiary provider through their experience at the academy.

The Ngati Porou East Coast schools have undertaken not to have any interschool events on a Friday. The senior students do all of their other subjects on the other four days. We have used Fridays to provide junior leadership opportunities and to offer Star programmes.

As an East Coast school we face our own set of challenges particularly with the distance and isolation. The five schools on the Coast each make their own arrangements for transport. We all send a teacher with the students as we can't send them these distances without supervision. We are working through this issue currently with the Ministry as we do lose funding by sending the students to the academy. We are lucky in that we can get the students back in time to connect with the other buses. This is not the case with the other schools.

The regular communication from Paul Hursthouse and his efforts to seek feedback have helped a great deal with establishing an effective working partnership for this initiative. EIT is trying to address one of the most isolated communities in New Zealand.

We have recently talked about small rural schools collectively forming a class for achievement standard programmes. I welcome this opportunity to look at the school-tertiary interface and come up with a blended model that offers greater student choice.

We also look forward to having ultrafast broadband in the school. We can see that this will reduce our isolation and offer possibilities for increased collaboration in education.

■ **Campion College**

Campion College is located in Gisborne. Sue Peard manages the Gateways programme and is careers advisor at the school. She says:

Campion College currently has 12 students in the academy – seven more than in 2012.

We do not have the facilities to deliver engineering, automotive, catering, or hairdressing courses, so the academy has increased opportunities for our students.

Also, the academy gives students who might otherwise have left school the chance to re-engage in education. Several academy participants returned to school this year as year 13s to pursue career interests.

Some of our students are participating in the Gateway initiative and also attending the academy. This can be a very effective combination.

A highlight of this year has been to see the engagement of a special needs student enrolled in the automotive course. Collaboration between EIT, the school, and the student's family has given him the opportunity to gain valuable experience and possible further educational opportunities. His dad is an active participant and often meets up with him for lunch.

The academy has shown flexibility and understanding by allowing students who have left school to continue with their academy programmes.

Students are increasingly recognising the need for qualifications. By observing full-time students working on projects (for example, students on the full-time carpentry course building a house), our students can visualise a pathway between their current academy programme and future full-time tertiary training.

The school currently has the flexibility on Fridays to allow students to participate in other educational opportunities. Students rarely miss academy days.

The partnership with EIT has been great. Communication is very good and we can visit the polytechnic at any time to see our students at work. Their progress is reported on regularly and, where there are problems, EIT staff try to find solutions that work best for the students. For example, when the family of one of our students moved out of the area, EIT was proactive in trying to transfer the student to a similar programme in another polytechnic. This is testament to the effective partnership between school and EIT.

Technology Luge Project

For three schools in the Waikato, making a street luge has proven a hugely engaging project for boys taking level 1 technology. As they have learned new practical and technological skills, the students have also learned a lot about self-management, project ownership, and other vital workplace competencies. A competition is a major motivating factor.

■ Focus

NZC level 6 technology (materials), which aligns closely to the Manufacturing and Technology vocational pathway.

■ Scope

NCEA level 1 technology.

Two classes at St Johns Hamilton, one at Morrinsville College, and one at Cambridge High School.

In all, about 75 students are involved.

■ Purposes

To provide a learning context that:

- uses the scope provided by the New Zealand Curriculum to devise learning programmes that meet the needs of students
- motivates students to achieve their very best
- demands a lot of design, problem-solving, knowledge about materials, hands-on making, and testing that will develop valued knowledge and skills
- leads to the development of a common product yet allows for individualised outcomes
- is do-able within such constraints as location, time, available equipment and materials, and cost.

■ Key features

- Full-year project
- The idea (to build a street luge) came originally from a student
- Wheels, speed, and competition are features of the project that fire the imagination and engage the efforts of the male students
- Makes use of a particular local opportunity: an otherwise unused luge track built by the Hamilton City Council about 25 years ago
- The requirements of the outcome are specified but there are many different ways of meeting them, allowing for a high level of individual input
- Collaborative and competitive elements
- Students meet from time to time in “design groups” of three or four to discuss ideas, support those who are having trouble, and reign in unworkable plans

- Completed luges face a performance test in the form of a competition that involves all three schools
- Success of luges depends largely on design and the performance properties of materials
- Race day provides an excellent, real-life deadline for project completion
- Students can seek advice but they must do all the hands-on work at school without specialist help.

■ **Initiated**

In 2008 by Steve Andrew (St Johns) and Michael Johansen (Morrinsville College).

When Michael later moved to Cambridge High School, he introduced the luge project to the year 11 technology students there.

■ **Drivers**

The need for a real-life project that would fully engage the students and allow lots of scope for technology learning as is appropriate at NZC level 6.

The need for a project that would encourage high levels of achievement and enable NCEA level 1 success.

See also Purposes (above).

■ **Partners**

The three high schools, which are linked by a spirit of both collaboration and competition

Industrial Tubing, Hamilton. This private manufacturing company has been involved in this project from the start, providing engineers to come and talk to the students about materials and processes, helping source materials, providing a trophy for the competition, and assisting with assessment and judging. Staff are always involved in race day.

Wintec provides specialist facilities and training. For example, the students all do a one-day welding course at Wintec – a course that is oriented to the skills they are most likely to need when making their luges. STAR funding makes this possible.

Parents. Parents are strongly supportive of the students and their work. They come to Minogue Park on race day and help to make it the big occasion that it is, putting up tents, manning barbeques, and assisting the students repair broken or damaged luges.

Other local industries are also very obliging, including by having students visit. Steve takes every opportunity to get his students onto industry sites so that they can see what actually happens there. These visits help expand the vocational imagination of students, introducing them not only to different kinds of industries but to different roles within industries.

■ **Programme**

While each of the three schools has its own particular emphasis and approach, all build their entire NZC level 6 programme around the luge context.

Steve says that one of the features of the project is that it provides an intersection between technology, science, and mathematics. Not having a strong physics background, he asks a

physics teacher to come and talk to his students about the physics involved, so that they can design their luges with some understanding of friction, gravity, momentum, etc.

The level 2 programme is very different, but builds on what has gone before. This year the students are exploring what is possible with more sustainable materials, including bamboo and hemp. The University of Waikato has provided support, as has the Hemp Farm and the city council, which has allowed the school to harvest trailer loads of bamboo from a plantation. This is very new territory for Steve as well as the students: "There will be answers," he says, "but we don't know them yet."

■ Outcomes

"The students do really well in NCEA level 1. "The failure rate is just about zero, and the quality of the outcomes can be very high."

Technology students go on to a wide variety of further training and vocations. These include university, Wintec, trades, and army. The self-belief, collaborative and self-management skills that students learn in year 11 technology stand them in good stead for careers in other vocational pathways, too.

■ Other outcomes

- High levels of student ownership
- Development of key competencies, especially thinking, managing self, participating and contributing
- Students so motivated they often work lunchtimes
- Strongly positive impact on year 10s
- Classes operate with very light teacher "touch"
- Collaborating with other teachers and other schools develops the thinking of all involved
- Significant business and community support.

■ The future

There are times when, in spite of its success, Mike thinks he would like to move on from street luges and try something else. But the year 10 students won't hear of it. They have been waiting for their turn to come.

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■ See also

Technology Online article: <http://technology.tki.org.nz/Resources/Case-studies/Classroom-practice-case-studies/Resistant-materials-hard/Street-luge>