



The Starpath News

July 2009 | Issue 2

New insights into NCEA subject choices

Starpath has released the findings of a major study into how NCEA course choices are made by Māori, Pacific and other students in low decile schools, and the effects of those choices.

Titled *Towards university: Navigating NCEA course choices in low-mid decile schools*, it reveals why and how many academically-able students are choosing, or ending up in subjects, that limit their chances of entering and succeeding in tertiary study.

The study is an important contributor to Starpath's overarching goal to design research-based interventions to raise achievement levels among Māori, Pacific and other students in low decile schools.

Previous Starpath research has revealed that Māori and Pacific students tend to enrol in fewer academic subjects, and to complete fewer credits from the approved list of subjects required to gain University Entrance than other students. The study progressed this further by seeking to understand why and how this was happening.

Starpath researchers spent 12 months in low-mid decile high schools in Auckland and Northland interviewing more than 160 students, parents and teachers about NCEA subject choices.

Starpath Director Dr Elizabeth McKinley says the most important conclusion to draw from the study overall was the need for more informed adult guidance when students, particularly those from under-represented groups, choose NCEA subjects.

"NCEA is very flexible, which is good as it caters for a huge range of students. However this flexibility can work against you if students do not have access to good quality advice and guidance," Dr McKinley says.

"Parents need better information tools to translate the complexity of NCEA, and schools need to engage parents and students to set high, but achievable, academic targets, and to review individual students' achievements and goals on a regular basis," she says.

The study also identified students who aspired to tertiary education but chose vocational subjects instead of academic ones. Subject selection was sometimes based on peer pressure, or wanting to acquire skills to gain part-time work rather than academic progression. Students reported on "playing the system", choosing subjects to maximise credits or to avoid having to sit exams. Subject choice was not always student-driven, with schools playing a mediating role in what subjects

were available, how they were timetabled, and who was selected for the more difficult standards. Importantly, many parents did not understand NCEA so were unable to advise their children on making good subject choices.

Dr Irena Madjar, the lead researcher on the study, says NCEA works well when students are able to make fully informed decisions, with advice and support from adults who know them and their academic potential, and when schools are able to act on such decisions. But, as one of the teachers in the study commented, "NCEA is still a work in progress", both in terms of its design and how it is implemented within individual schools.

"One of the critical areas that deserves continuing attention and more focused effort is making information about the NCEA system better and more widely understood by students, parents, and the wider community," Dr Madjar says.

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Dr Irena Madjar.

Welcome to the Starpath News

This newsletter is published by The Starpath Project to keep schools and our community informed about our latest research and developments. For those who don't know much about us, Starpath is a team of researchers based at The University of Auckland. The team is working with secondary schools and institutions to transform educational outcomes for New Zealand students who are currently underachieving at secondary school, and hence are under-represented in tertiary education. We hope you enjoy reading about our latest projects.



Starpath staff (back row from left) Rolf Turner, Irena Madjar, Yoshiko Kawasaki, Seini Jensen, Elizabeth Clarke, Elizabeth McKinley, Georgina Stewart, (front row from left) Meisong Li, Alice Van Der Merwe, Samantha Smith, Johnson Yuan and Marianna Deynzer.

Making the difference



As the Chair of the Starpath Board I would like to welcome you to the second Starpath newsletter. Starpath was established in 2005 as a Partnership for Excellence between The University of Auckland and the

Government to carry out research and design interventions which would enhance the participation and achievement of students from groups under-represented in tertiary education. Starpath is key to The University of Auckland's leadership in the promotion and practice of evidence-based research aimed at achieving equitable educational outcomes for all students.

Starpath has just released a significant report called *Towards university: Navigating NCEA course choices in low-mid decile schools*, which features in this newsletter. The report highlights how important it is for schools to continue their work in advising students about NCEA and assisting them to understand the consequences of differing pathways. It is equally important to assist parents in their understanding of NCEA so that they have confidence in their ability to help guide their children's choices. Timely academic guidance and clarity of academic pathways are most important to improving outcomes for students, particularly Māori and Pacific students, in low and mid decile secondary schools.

Starpath is currently developing and trialling interventions that address the barriers which prevent students continuing to achieve educationally. The Starpath team has identified the need for schools to have rich and accurate information to make decisions about individual student progression. Interventions to develop effective and well-organised longitudinal data in schools, increase data literacy among staff, set targets, and carry out academic counselling with students have shown promising results.

Other Starpath interventions are based on using these data. Working in collaboration with the Woolf Fisher Research Centre to address low levels of literacy, teachers are learning how to use student achievement data and evidence from their own work to monitor and improve their teaching and student learning. Student gains are high, particularly for Māori students. The work of Starpath is a vital component in the development of an evidence-led and collaborative approach to improving the educational participation and achievement of New Zealand's young people. Recent debates on access to university education show how important it is for us to continue this work.

Professor Raewyn Dalziel
Chair
Starpath Board

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Key recommendations from the study are summarised below:

- There is a need for greater transparency in distinguishing between academic and vocational subjects in NCEA and their intended uses.
- For students intending to go to university, there is a need for clearer identification of subjects they should not take, or should take only in addition to, rather than in place of, essential academic subjects.

- Schools need to be better resourced to provide quality academic counselling and subject/course advice to students and their parents.
- It is important schools identify the critical points when students with academic potential find themselves falling behind, or make inappropriate subject choices, and make timely corrections to their study programme.

The full report of the study is available on the research page of the Starpath website www.starpath.auckland.ac.nz.

League tables hide underachievement

By Associate Professor Elizabeth McKinley

At this time of year, many concerned parents closely study the NCEA results of the country's secondary schools.

The figures, published annually in the form of "league tables", are widely regarded as telling us which are our best-performing schools. Those that "punch above their weight" are identified; provincial newspapers celebrate the achievements of their local schools.

But figures can be deceptive. What the tables tell us – and, more important, what they do not tell us – is widely misunderstood.

This year's results, reported in newspapers recently, contain more detail than ever before. For the first time, we can compare student achievement by ethnicity, for example. We can compare schools by decile level, by type (single-sex versus co-ed) and by region. We can make useful comparisons between a given school's achievements at different NCEA levels and see how individual schools are doing in relation to national results.

But substantial difficulties remain. The New Zealand Qualifications Authority, which administers NCEA, has been reported as saying that the new reports are more "meaningful" because the percentages of students gaining qualifications are now based on the numbers participating, rather than on school rolls, as in previous years.

This move to participation-based figures was designed to more accurately represent the achievement of schools where many students are not pursuing NCEA qualifications. Typically, these are the higher-decile schools in our leafy suburbs which offer their students internationally moderated assessments – the International Baccalaureate (IB) and the Cambridge International Examinations (CIE) – but not always.

The percentage pass rates for those schools have gone up, because the students not taking part are not counted. But there are schools where significant numbers of students do not appear in the NCEA reporting for other reasons.

Let us consider the following scenario. School A reports a NCEA Level 3 pass rate of 65 percent; School B reports 62 percent; and School C 26 percent. The obvious conclusion is that A and B are achieving at about the same level and School C is failing. But what if we know that in School A and C almost all the Year 13 students are doing NCEA; in School B only 46 percent are participating?

There are a number of reasons for this. Some students at School B could be doing IB or CIE;

some students could be studying subjects at NCEA level 1 or 2, even though they are in Year 13; and some may not be entered for the minimum number of credits to qualify for inclusion in the reporting.

In the first scenario – that students are entered in another assessment system – the percentage reported accurately reflects a school's performance because it is a percentage of those actually participating. But in the other two scenarios, a roll-based percentage would more accurately reflect the school's performance because it makes clear the number of students in Year 13 who are not taking part in Level 3 assessments. Yet that group remains hidden.

If we recalculate the numbers by school roll, Schools A and C still have the same pass rates but School B goes down to about 28 per cent – the same level as School C.

If only 46 percent of their students at Year 13 are participating in NCEA Level 3 (against a national average of 77 per cent), it is likely that the school has problems that are not evident in the reported results. This is a significant group. Furthermore, it is impossible to find out from the information who is not participating, although national statistics suggest it is mainly Māori and Pacific students and it is likely that many of these students are still studying at NCEA Levels 1 and 2.

We should be concerned with this level of Māori and Pacific student underachievement. Any form of reporting that hides this historical and enduring issue should not be supported.



Associate Professor Elizabeth McKinley.

Following Pacific students to university

The transition from school to university is a critical time for many students. For those who are the first in their family to attend university, it can be a time of struggle and uncertainty.

Starpath researcher Marianna Deynzer has been examining the experiences of Pacific students as they progress from school to university.

Marianna, of Tongan and European descent, completed the study as part of her Master of Arts (Development Studies) thesis. Her study is part of a larger Starpath project, looking at the transition of students of various ethnicities from both rural and urban areas to university.

Eleven Pacific students, predominantly from South Auckland, took part in the study. They were followed from the end of their final year of high school in 2007, through the summer break and until the completion of their first semester at university in 2008. Marianna interviewed the students regularly about their experiences and students themselves completed journals and took photographs documenting their journey. Further data came from students' academic records.

"The majority of participants were the first in their families to attend university and they carried with them high expectations from their schools and communities, as well as their families," Marianna says.

The students had all been targeted by their schools as having university potential, and most had been in a university mentoring programme.

Nevertheless, many encountered significant problems relating not only to being at university, but also preparing for university.

"The summer period between the end of school and beginning of university was a time of significant turbulence. Some participants suffered from crises of confidence. Difficulties with enrolment and accessing StudyLink services were common, and all of this had negative flow-on effects once they began university."

Marianna observed the process of transition for this group was one of negotiating a series of "disconnections". Although disconnection is present for all students during this period, for those in her study, various facets of their educational, socioeconomic and cultural backgrounds gave rise to far more pervasive and numerous disconnections, which compounded one another. One of the most significant was academic.

"There was a disconnection between subjects taken in earlier school years and those needed to attain University Entrance; between subjects taken at school and the university course they intended to take; and between relying heavily or solely on internal assessment to pass subjects at school, and then being required to pass exams in order to pass courses at university," Marianna says.

"Regardless of their personal struggles and academic outcomes, all who completed their first semester were proud to be at university and had



Marianna Deynzer has been following the transition of Pacific students from school to university.

no intention of withdrawing. For many, being at university and surviving their first semester was an accomplishment," Marianna said.

Marianna's thesis is currently under examination but should be available once it has been approved for the award of her degree. The report of the larger project will also be available later this year. In addition, Marianna is assisting with the compilation of a book of transition stories written by some of the students who took part in the study. The book will be distributed to schools and universities as a resource to other students making the transition.

Teachers as learners – a community approach



Peter Garelja, Principal, Tikipunga High School

A message from one of Starpath's partner schools - Tikipunga High School.

Tikipunga High School has found its participation in the Starpath Project to be highly beneficial and strongly aligned with directions in which the school is heading. Tikipunga High School is a Years 7-13 school located in the north-eastern suburbs of Whangarei serving a decile 2 community and has a roll in the mid 400s, in which 70 percent of the students are Māori. The school is in the midst of a period of change. I have been the Principal for two-and-a-half years, a new Deputy Principal has been appointed and there has been considerable change to the composition

of the Board of Trustees.

In line with the arrival of the revised National Curriculum the school has taken the opportunity to spend much thought and time on rewriting the Charter, incorporating the school's mission, values, vision and strategic intent. The mission for the school is "Tukua o Punga" interpreted as meaning "cast your nets". The core value which underpins this mission statement is "Mana Tangata" – the importance of people and relationships as a foundation for successful learning partnerships. The vision for the school is "A learning community in which all students and teachers are successful learners". It is quite deliberate that we see our teachers as being learners. To achieve our vision, and live to our values we are applying six principles in order to sustain a community of learners at Tikipunga High School. One of these principles is "using data to guide decision-making and continuous improvement".

For us an exciting initiative we have been involved in for almost two years is the establishment of PLCs (professional learning communities) for teachers as an alternative means of providing relevant professional development. During 2007, we decided to offer to staff who were interested the opportunity to be part of a PLC. The operation of this PLC was facilitated by a researcher from the University of Canterbury who had personal connections to the school. The group of six teachers met and determined that a common area of interest was how to get students to care

about their learning. Professional readings were shared and ideas debated. After becoming familiar with the action research model each teacher undertook their own research in using the students that they taught to test out ideas. Later the group had the opportunity to share their findings with each other. It was a highly energising experience, liberating for the teachers as it encouraged them and rewarded them for being reflective about their practice. Interest in the activities of the PLC was such that the group was invited to present papers at the NZARE Conference and at the PPTA Curriculum Conference.

This year we have again offered an invitation for staff to form PLCs. The level of interest has been such that this year there are four PLCs in operation, each with separate themes, these being implementing the revised national curriculum, using data as evidence, restorative practice, and innovative approaches to learning and teaching.

The school's participation in the Starpath Project has assisted us in gaining the expertise to shift from collecting data and doing little with it, to empowering teachers to use data formatively as part of the evidence gathering process which is an integral part of action research.

Personalised learning is not only for students, but also for teachers.

Peter Garelja
Principal, Tikipunga High School

Aiming high improves success



Samantha Smith.

Setting targets above a student's predicted ability has improved NCEA scores dramatically at a large West Auckland secondary school.

The results are from an academic mentoring project at Massey High School. The school came up with the idea for an academic counselling and target setting initiative to help support their students through NCEA. The programme began in 2007, and since that time has been managed by Samantha Smith, the school's Student Achievement Manager, who is now a researcher on the

Starpath team. She is also completing a PhD study on the programme.

The Academic Counselling and Target Setting (ACTS) initiative boosted NCEA completions at Massey High School by 10 percent. The results were even better for Māori and Pacific students, with completions for Māori students rising 13 percent and for Pacific students 16 percent. In the vital areas of Numeracy and Literacy at Level 1, increases have been recorded of 16 percent and 20 percent respectively.

"The whole idea of the project," says Samantha, "was that we have so much data about students that we should be using in a constructive way for forward planning – not just using it to show how we did in the past."

Under the programme, each student's academic performance in Years 9 to 11 was analysed to predict what they should achieve in Years 12 and 13. Targets were then set above this. This was combined with regular academic counselling sessions with deans, and the involvement of parents in the programme by restructuring parent-teacher interviews. Sam says the initiative is unique because it involved the whole school community including staff,

parents, and students to lift expectations and achievement.

Samantha is a former maths teacher from the UK and her study was supervised by internationally acclaimed educational expert Professor John Hattie.

"It is so powerful to set learning targets and then work to these as this increases the chances of reaching the targets in the time available," John comments. "It requires quite a different way of thinking about teaching and progression through standards."

Massey High School Principal Bruce Ritchie says the programme has resulted in an "atmosphere of achievement" at the school. Academic counselling has also helped with the challenges of meeting the individual needs of students in a large school with a multicultural roll of more than 2400.

By deliberately keeping the system simple, Samantha believes it is possible to share it with other schools to achieve similar results. The results will be incorporated into interventions being designed by Starpath to raise achievement levels among Māori, Pacific Island and students from low socio-economic backgrounds across all secondary schools.

Teachers, students and parents have say on Massey intervention



One year on, the intervention at Massey High School is receiving positive feedback from the school community. Principal Bruce Ritchie is pictured with students.

How can we be sure the Academic Counselling and Target Setting (ACTS) initiative at Massey High School is working?

While it may have improved NCEA results after one year, Starpath has also conducted an evaluation to provide richer feedback from the point of view of students, parents and teachers. Starpath investigated the experiences and impact of the ACTS intervention on the 2007 Year 11 students, their parents, teachers and other key staff. Using questionnaires, interviews and focus groups, they were able to question how well the intervention was working in practice.

The results show the majority of students and parents are positive about the initiative. Students reported the programme helped them to set and realise goals, and to think about where they wanted to be in the future. Most students (63 percent) thought the ACTS programme should continue while just 5 percent thought it should not. Parents commonly said it allowed them to be more involved in their child's education. Over three-quarters of parents thought the programme should continue, while only 1 percent thought it should not.

The ACTS intervention was made up of three key initiatives: parent-teacher interviews; academic counselling; and target setting. The restructuring of the parent-teacher interview – so that parents/caregivers met for 20-25 minutes with their child's form teacher for an in-depth overview of their progress across all subjects – resulted in a dramatic increase in the turnout of parents and caregivers, from 9 to 13 percent in previous years to 76 percent in 2007. There was resounding support for this initiative from staff, despite the increase in workload it presented. It was seen as a catalyst for strengthened interaction between the school and community, and had flow-down effects on student behaviour and effort.

The academic counselling sessions that deans conducted with students had a number of benefits, notably improving dean-student relationships, as they became focused on achievement rather than bad behaviour. They also created a culture in the school of students talking openly about their academic achievement and progress, and increased awareness among students of how NCEA worked and how courses can contribute to possible careers.

Some teachers initially had reservations about the target setting, but also reported how surprised they were in the interest from students. While some teachers said it had been effective in motivating students, others were unsure of its effectiveness, but agreed it "couldn't hurt". The targets were found to be useful in getting students thinking and talking about their goals, and showing them someone believed they could do well.

The evaluation suggests that further investigation of the ACTS programme, including trialling it in more schools, would be very worthwhile.