

## PART 1 INQUIRING INTO PATTERNS OF STUDENT LEARNING

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Each of the studies in this section forms an inquiry into student achievement issues. In most cases, the inquiries were sparked by a mismatch between what was wanted for the students and what was being achieved, with school leaders and teachers who were at a loss to explain the patterns that they were seeing. In Carol's case, why did it seem that students, who had been successful in English all the way through their schooling, now struggle with NCEA Level 3? For Liz, why would students who enter school with high emergent literacy skills not make more progress? For Trish, why might students be 'plateauing' at Stage 5 of the numeracy progressions? Jacqui's study was a slight exception. For her, the inquiry was sparked by a need to investigate whether the recently established bilingual unit was making the desired impact for their learners.

Because learning is so crucial to schools, in each of the studies, the Lead Teachers sought to detail a rich picture of student learning, in a systematic way, with a high degree of specificity. Each needed to identify, check, prioritise, and investigate learning, and so each needed to understand what worked (or didn't) for whom, and under what conditions. Although all the studies in this section focused on student learning, none focused exclusively on achievement outcomes. Wider

outcomes for students were also valued; for example, culture (Carol, Jacqui), languages (Jacqui), relationships (Carol), and self-regulation (Liz). Outcomes for teachers and families were also valued; for example, teacher knowledge (Trish, Liz) and home–school connections (Jacqui).

To gain a detailed picture of students' learning, the Lead Teachers needed to investigate students' achievement levels and their progress and to seek a level of detail to unmask patterns. Knowing about students' achievement levels at a single point in time as well as their progress over multiple points of time is needed if we are to gain a rich picture of their learning. Clearly, the most desirable situation is for students to have high levels of achievement and to be making high rates of progress, whereas having low levels of achievement and low rates of progress is the least desirable situation. It is vital that we investigate both achievement and progress because the implications for students and teachers of low levels / high progress rates, for example, are very different from high levels / low progress rates. The latter is what Liz found. Students at her school seemed to be doing well with more students at or above the National Standards than other schools. However, when she examined progress as well as achievement, she identified that progress rates were much lower than expected. It seemed to her that the 'high on average' achievement had actually masked a problem of progress.

Lead Teachers used different approaches to investigate students' achievement and progress. In the earliest stages of their inquiry most used some form of cross-sectional data. The assumption of cross-sectional analyses is that different cohorts of students in a particular school are fairly similar from year to year. In many high schools we would predict the mean achievement of Year 9 students at the beginning of Term 1 in 2016 to be pretty close to that of a new cohort of Year 9 students at the same time of year in 2017. That being the case, we can estimate the amount of progress students make by comparing the levels of Year 9 students with those in Year 10 in the same year. When cohorts are fairly large, and there have not been major changes in school or student factors, such as professional development or demographics, cross-sectional analyses can give a useful snapshot of patterns. For several of the Lead Teachers, including Carol, Liz, and Trish, preliminary analysis of cross-sectional data was what had first alerted them to problematic patterns in student achievement in the first place.

A limitation of cross-sectional analyses of course is that internal and external factors mean different cohorts of students can be quite different from one another. For this reason, most of the Lead Teachers went on to use longitudinal analyses whereby they matched individual students' data over time. This is a complicated and laborious process but it allowed the Lead Teachers to be much more accurate and precise in their judgements about progress. Longitudinal analyses enabled Carol, for example, to identify two key patterns. First, high-achieving Pacific girls tended to have lower grades in Level 3 NCEA English than Level 2, whereas the pattern was opposite for girls from other backgrounds. Secondly, Pacific girls' progress was more varied (or volatile, as Carol called it) than other girls'; their Level 2 results were not as reliable a predictor of Level 3 results. The 'volatility' could not have been identified without longitudinal matching of individual students' Level 2 and Level 3 grades. Repeating the analysis for different cohorts of students, and finding the same patterns, meant Carol could be more confident that the issues were not restricted to a single cohort. In Jacqui's study, matching the students over 3 full years allowed her to notice improvements for bilingual students in their reading progress over summer, not equalled by their peers in mainstream classes.

Variability between students (comparison between groups) and in the same students over time (comparison between time points) formed the basis for all of the inquiries. Inquiring into levels required looked at patterns of attainment at a specific point in time; looking for specific strengths and gaps; behaviours, practices, skills in different contexts; and attitudes and beliefs. Inquiring into progress meant matching individual students' data over time, sometimes over years (Jacqui). This detailed picture was required so that the Lead Teachers could 'check' perceptions (Carol), 'check' that the problem they identified was a real problem (Liz), and drill down into which aspects of learning were the most problematic (Trish) or were most advantageous (Jacqui).

The use of mixed methods in the studies allowed the Lead Teachers to come at an inquiry in different ways, garnering a multi-dimensional view on the learning. Methods drawn on by scholars included both quantitative analyses of achievement results, and qualitative analyses of interviews, artefacts (e.g. work samples or planning documents), or observations. Each of the Lead Teachers used achievement data to find

the patterns, but each also used a qualitative method to understand the patterns. Liz, for example, observed the children in reading groups, Carol talked with students throughout their Year 13 year, Trish analysed teachers' planning and assessment, talked with teachers, as well as interviewing the students, and Jacqui interviewed teachers and family members. These insights provided valuable evidence, but none of the methods was enough by itself. Instead, the mixture of evidence helped the scholars develop a detailed picture of the issue, from different angles. While the designs differed, in many cases the Lead Teachers divided their studies into phases, with an initial phase to describe the patterns, and a later phase to seek understanding of them. In this way, the studies often employed a *mixed methods, sequential, explanatory* design.

Finally, each of the scholars demonstrated the need to be cautious in their interpretations. Sometimes the studies were restricted to looking at quite small numbers. In these cases the Lead Teachers needed to beware of making too much of one source of data. Instead, each considered the data as only part of the picture, building up the weight of evidence by drawing from different sources, or cutting the data in different ways, or bringing multiple data sources together. In each case, the convergence of evidence allowed the Lead Teacher to draw tentative conclusions which could be supported by evidence, or to develop hypotheses which could be tested through collection of new evidence.

# Chapter 1 Pacific girls' perceptions of the enablers and barriers in Level 3 NCEA English: A little talanoa goes a long way

Carol Jarrett

The study arose from a perception among teachers in the school that Pacific girls were not achieving as highly in NCEA Level 3 English as their Level 2 English results led us to anticipate. Our anecdotal evidence suggested that achievement levels were affected by a loss of confidence, competing demands from leadership roles and co-curricular activities, and a struggle to maintain motivation in their studies.

Lower achievement averages in national qualifications and standardised testing has prompted the Ministry of Education to label Pacific students “priority learners” (Ministry of Education, 2013). One of the risks of this approach is that defining an educational

*Carol's study was designed to understand the mismatch between teachers' expectations and the outcomes for students in Year 13 English.*

*Carol's analysis of the literature identified threat, the importance of culturally inclusive learning environments, and teacher-student relationships.*

problem by ethnicity can lead to stereotyping, which in turn can lead to decision making that is detrimental to learners: low expectations, less challenging work, limited pathways, and limited access to higher education. Stereotypes can be so pervasive that they directly affect the achievement of minority groups.

Actively valuing the cultural capital of students is recognised as important in fostering more equitable outcomes for students. The potential enablers for Pacific students include the teacher having a knowledge of the learner and a willingness to use this knowledge to make the learning environment culturally inclusive, providing a sense of belonging, validating the learner's own cultural capital, and enabling cultural capital to inform the learning.

My mixed methods approach was informed by Creswell's (2013) transformative model which seeks to "address a social issue for a marginalized or underrepresented population and engage in research that brings about change" (p. 546). This matched my intent: to learn from Pacific students their perceived barriers or enablers to success in Level 3 English, and to gain insight as to how to best meet their needs.

NCEA Level 2 and 3 data were collected from the school for the previous 2 years' cohorts. The data were matched; students who were not part of Year 12 and 13 cohorts were excluded. A Grade Point Average (GPA) was calculated for each student for both years and then plotted on a scatter graph to illustrate the difference in achievement between Level 2 and Level 3 for each student. The data were disaggregated; separate graphs were created for Pacific and non-Pacific students to identify whether there were different patterns for the two groups.

For both cohorts, the highest achieving Level 2 Pacific girls had a lower GPA in Level 3, while their non-Pacific counterparts showed an increase. However, at the same time a good proportion of the Pacific students improved. We described the data for Pacific students as

*Carol conducted her study in two phases. In the first phase, she used the schools' NCEA to understand the issue. In the second, she talked with Year 13 girls about their experiences.*

*Carol had to go beyond looking at 'averages' of both groups because of the variation apparent when she plotted the data on a scatterplot.*

'volatile'; NCEA Level 2 English data was not as a reliable predictor of their achievement in Level 3 as it was for the majority of non-Pacific students. This finding would suggest the importance of using data that can inform teaching of individual students rather than to determine wholesale pathways for groups of students.

Because the aim of the work was primarily to learn from the Pacific participants, I wanted to use the Pacific research methodology of talanoa (Vaiotei, 2006). The aim of using talanoa was to learn *from* the students not just about them. By taking this approach, I hoped to enable participants to direct the pace and direction of the interviews, privileging the topics they wanted to focus on.

*Carol chose a research methodology to acknowledge and mitigate the difficulties of having a dual role as teachers and researcher.*

Six Pacific students from the 2014 Level 3 English cohort were interviewed twice over the course of the study—early in Term 2 and then again in Term 3. The first interview began with demographic questions about the students' cultural identity, family, first language, school, and out-of-school commitments and aspirations. Students rated their perceptions of Level 3 English in relation to Level 2 English and their other subjects. The remaining questions were open-ended, encouraging the students to discuss their views of English content and pedagogy.

The cases highlighted the diversity among the six participants despite being a small sample of Pacific students. At the time of the interviews, results for internal assessments completed so far showed that five of the six

*Factors that at times worked as barriers at other times worked as enablers for the students.*

participants were exceeding their Level 2 English grades. However, the factors that acted as enablers and barriers for success in Level 3 English were different for the individual students, and the enablers and barriers interacted in different ways. Relationships with teachers, while valued, did not tend to dictate the participants' achievement. Similarly, the ability of teachers to help students make a personal connection to the course content did not correspond in a simple way to each students' academic engagement. External factors such as leadership roles, home obligations, and co-curricular and church commitments at times created pressure but at others provided the skills and attributes to succeed

in the classroom. This suggests the combinations of enablers and barriers are perhaps more important than the type of enablers and barriers themselves.

Some participants in this study, while still identifying and being identified by their Pacific ethnicities, felt that they were losing a connection with aspects of their cultural identities. Only one participant in this study reported confidence in maintaining her language; all described some tension at home as a result of their heritage language being less commonly used. Tuafuti and McCaffery (2005) stress the importance of “life chances and life choices” for Pacific people (p. 488). They argue the power of culture comes from the individual’s right to determine the aspects they maintain and the opportunity to do so. Part of the uncertainty around their identity for four of the participants in this study seemed to stem from a lack of choice and power.

*Carol’s findings highlighted the importance of language, of stereotypes, and of motivation.*

In addition, the participants in this study were aware of societal stereotypes of Pacific people and the negativity surrounding Pacific students’ academic achievement. This had led them to “think less” of themselves and to see themselves as less able than their non-Pacific peers including other ethnic minorities.

All six participants were motivated to succeed at school for their own benefit but also to be a source of pride for their family and to inspire younger siblings. However, in addition to this, the participants saw achieving academic success particularly important as “an Islander”. This seemed to suggest that the participants saw themselves as representatives of all Pacific people; as if they had a personal responsibility to contradict stereotypes of their entire multi-ethnic community. This challenge served as a motivator but was also overwhelming for the individual.

The volatility of Pacific students’ data in this study raises questions about how data are used and how they inform the decision-making processes in schools about things such as streaming, course allocations, and the breadth of the curriculum to which students are given access. In order to achieve the ambitious goals identified in documents such as the Pasifika Education Plan, a more nuanced approach needs to be taken in prioritising Pacific learners. Priority needs to be given to



approaches that further the success of high-achieving Pacific students. Ultimately, the perceived enablers for these Pacific girls in NCEA Level 3 English seemed to be the combination of teaching practices and experiences outside the classroom that supported their learning at a particular time. Classroom-based enablers needed to be combined with other enablers, including those from the students' lives outside of the teaching environment. Some factors that are often framed as barriers for Pacific students, such as having responsibility for younger siblings, were in some cases enablers for the participants in this study. Only the students themselves can provide teachers with insight into the individual's barriers and enablers, and how these factors are interacting. For that reason, a little talanoa with our Pacific students could go a long way to making this happen.

*Carol concluded that barriers and enablers were different at different times for different students. Assumptions about barriers and enablers, Carol argues, are another type of stereotype threat for Pacific youth.*