Retention of first-year Māori students at university

Jacques van der Meer, Stephen Scott and Tia Neha

Abstract: Students' first-year experience has long been recognised by both universities and the New Zealand Government as an important element in degree completion. There is little New Zealand research on the factors that contribute to first-year retention of Māori students in general, and in Otago in particular. The findings of one small scale satisfaction study (University of Otago, 2004) suggest that the support provided by the centre is viewed positively by students who have used the Te Huka Mātauraka (the University of Otago Māori support centre). There is no other empirical evidence related to Māori students' first-year experience at Otago.

In 2007 a small team of researchers started a multi-faceted research project seeking to gain a greater understanding on the recruitment, retention and achievement of self identified Māori students at the University of Otago. The focus in this paper is on the closed answer section of the survey that was administered in 2008. This section deals with respondents' opinions on a range of issues related to their studies and their knowledge and use of support structures in the university. Overall, the data indicate that with respect to their study and support expectations, the students are very satisfied with their experiences at the university. However, challenges could be discerned around academic workload and confidence to ask for help. Students' sense of preparedness, their understanding of what university would be like and their thoughts about not returning to university after their first year, seemed to be related to these challenges.

Keywords: First-year experience; support for Māori students

Introduction

Degree completion is of concern to universities and other stakeholders. In considering all groups of students, the University of Otago is doing well relative to other New Zealand universities (Clark, Van der Meer, & van Kooten, 2008). The completion rates of Māori students at Otago are also high relative to other New Zealand tertiary providers. Increased degree completion for Māori is of particular importance to universities and New Zealand and this is recognised in the Tertiary Education Strategy 2010–2015 (Ministry of Education, 2009). Māori educational achievement is seen as key to realisation of Māori potential, "Despite the pockets of brilliance, the level of unrealised potential remains sufficiently high to leave little room for complacency" (Durie, 2006, p. 15). Zepke, et al. (2005) suggested that given the projected Māori population growth there will be a greater proportion of Māori tertiary students in the future therefore Māori achievement, which is of importance to iwi, is also of national social and economic importance.

Research evidence from across the world is categorical that first-year retention is the key to degree completion (Krause, Hartley, James, & McInnis, 2005; Kuh, 2001; Pascarella & Terenzini, 2005; Tinto, 1993; Upcraft, Gardner, & Barefoot, 2005; Yorke & Longden, 2008; Zepke, et al., 2005). However, the elements that contribute to positive experiences during the first year of university are complex. Student retention and subsequent completion of students' study is important as it contributes to their well being, self-efficacy, confidence and future success.

Although there is a wealth of research related to the first-year experience and student retention, this is less so in New Zealand. Some reports have been published on particular

challenges for Pasifika students (Anae, Coxon, Mara, Wendt-Samu, & Finau, 2002; Coxon, Anae, Mara, Wendt-Samu, & Finau, 2002). The University of Waikato published a number of reports, which were mainly internally focused, on support for Māori students in various faculties (Hunt, Morgan, & Teddy, 2001; Levy & Williams, 2003; Nikora, Levy, Henry, & Whangapirita, 2002; Rua & Nikora, 1999). A project funded by the Teaching and Learning Research Initiative (TLRI) in 2003 yielded a number of publications on improving outcomes for tertiary students (Zepke & Leach, 2005, 2007; Zepke, Leach, & Prebble, 2006; Zepke et al., 2005). However, as Zepke et al. (2005) and Prebble et al. (2004) emphasised, there remains a paucity of New Zealand research in the area of student retention and student support.

Little research has been done at the University of Otago on academic achievement of Māori students and the factors that contribute to this. Anecdotally, there is a perception that self-identifying Māori students who seek academic and pastoral support from Te Huka Mātauraka (the Māori Centre) at the University of Otago do better academically than those who do not. The findings of one small-scale satisfaction study (University of Otago, 2004) suggest that the support provided by the centre is viewed positively by Māori students. However, there is no substantial research evidence to support perceptions of effectiveness. Our project seeks to contribute to the research on first-year Māori students' experience. In particular, we seek to identify the enablers and barriers that first-year Māori students encounter, and endeavour to use this information to facilitate change at the University of Otago that will enhance educational experience and outcomes for Māori.

Research related to Māori often focuses on problems and deficits. Durie (2006), in discussing educational issues related to Māori, advocates a move away from a "deficit model" of thinking and a "preoccupation with disparities and comparisons between Māori and non Māori, as if that were the most significant indicator of progress". This, he argues, "creates a distorted picture of actual progress and assumes that the non-Māori benchmark captures whānau aspirations" (Durie, 2006, p. 16). However, he also warns against ignoring problems:

> Ignoring problems as if they did not exist is not a sensible answer but balancing problem detection and problem solving with equal weighting on identifying promise and potential could create another level of engagement that leads to longer term positive outcomes. In other words, solving problems may only be a first step in encouraging the realisation of potential. The challenge for whānau support is to shift from a paradigm of deficit and risk, to one of potential and discovery. (Durie, 2006, p. 16)

It is within this spirit that we undertook this research as we seek to understand both barriers and enablers, both helpful and unhelpful experiences. In doing this, however, we focus more on institutional factors that the institution can influence, rather than on perceived deficits 'within' students.

We also recognise that the university is a place where some Māori students begin to explore what their Māori identity means to them, often through the support mechanisms available to them (for example, Te Huka Mātauraka). Involvement of students in this project may well be a catalyst for some to start this journey. We consider it important that we support this increased sense of self and well-being and a greater confidence in being Māori.

Lastly, by providing an example, this research project can also be used by other universities to improve their support of Māori students and enhance Māori research capability. Locally, we aim to enhance the research skills and knowledge of tikanga Māori of all the researchers involved through experience and practice.

To do justice to the richness of the research findings, this paper is limited to describing the development of the project and the findings of one part of the survey – the closed answer questions. The main questions we address in this paper are: 1) What broad trends can be discerned from students' responses to questions that relate to their study and support expectations and experiences? and 2) How do these responses relate to respondents' self-reported confidence with their Māori identity?

Research kaupapa

A kaupapa Māori approach to research has been used alongside 'Western' scientific methods to guide and inform research activities. In particular, we have drawn on Bishop and Glynn's (1999) kaupapa Māori educational research evaluation model and the expertise and knowledge of the kaitohutohu kaupapa Māori at the University of Otago.

The research group worked closely with Māori students, Te Huka Mātauraka staff and wider university staff to ensure a wide level of consultation for this project. Late in 2008, members of the research group spent two days at Te Huka Mātauraka to present and discuss the initial findings of the 2008 pilot study with staff of the centre and with a wide range of interested people from across the university.

Methods and procedures

In 2007 we carried out preliminary research focusing on the group of Māori first-year science and health science students. This group was chosen due to the perceived and real difficulty of retaining Māori students in these areas. For example, one half of the Māori first-year health science students had withdrawn from the programme by the end of their first semester. In 2008, the study invited participation from all first-year Māori students at Otago.

The project group chose a mixed method approach, incorporating both qualitative and quantitative data collection and analyses. Surveys provided the main source of information, with more in-depth qualitative data on the experiences of this group obtained from focus groups and individual interviews of current students.

Three hui and interviews in 2007 were held with students during our preliminary study stage to further develop the research programme and research questions. This stage included asking the students what questions they thought should be asked in a project aimed at retaining and supporting Māori students. Table 1 presents a selection of these which were used in working towards the questionnaire.

The hui contributed to the development of the draft survey questionnaire which was then administered later that year to students who had participated in the hui. Students were also invited to comment on and critique the questionnaire in another focus group. The results from this process resulted in further refining the questionnaire. During the interviews, another theme that arose was the importance of "identity" to students that were accessing support and their first-year university experience. This aspect was also incorporated in the research questions in 2008.

Table 1. A sample of questions suggested by students at the 2007 hui

Some responses to the question*: What do you think are some of the questions that should be asked in a project aimed at retaining and supporting Māori students?*

- Why did they come to uni? What do they study? Future dreams? Ask about their college, how they were supported there or if they were supported
- What made them choose their course of study? What are their plans to achieve? How do they feel about things are going so far? Is there something we can help with?
- What makes it difficult to feel valued? What are the temptations to drop out?
- Questions about their interests, how they need or require assistance, what they perceive their problems are going to be during the year
- To students at university, what are the continuing factors in you ending up at uni? Why have some of your friends/whānau dropped out? What has influenced you to stay in science/uni?
- What aspects of the student life will you find challenging? What facilities do you need access to, to be able to achieve a high standard? What is the most daunting thing about transition to uni life?
- Supporting Māori students. Making students feel welcome, so they feel safe
- Why are you here at Otago? Why would you leave Otago? What makes life good/bearable while at Otago uni?
- What ways do you think would provide more support for Māori students? Does the Māori Centre help provide a support base for students?
- What kind of problems have you faced so far? Are you involved in any support networks currently? What would make the university environment more welcoming for you?
- What helps you study? What do you need to do to do well in your studies? What don't you find helpful? How could the university system better support Māori students?

The questionnaire consisted of three sections: general demographic and other information related to students' interest to study at Otago; a number of open questions enquiring about their experiences and barriers and enablers in their study; and closed answer questions that sought to get a sense of students' experiences and perceptions related to help and information seeking and support structures in the university.

Students for the 2008 survey were recruited through the 13 residential colleges. Māori students not living in these colleges were sent the survey through standard mail. Contact information was provided by the University of Otago student administration. Email and text messages were used to send reminders. Students were provided movie tickets as a token thank you for their participation. The surveying took place in September, close to the end of the second semester.

We received 135 completed questionnaires (response rate 45%); 105 from students living in a residential college and 30 from students who lived in other accommodation. Of the respondents, 66% were women, 91% were under 20 years of age and 93% had completed their high school studies. The majority of respondents were school leavers who came directly to Otago from other parts of New Zealand.

Findings

Closed survey questions

The 2007 survey included 18 questions that investigated student experiences and satisfaction with their university study to date. As a result of the 2007 interviews and focus group, two extra questions were included in the 2008 survey. These related to the respondents self-perceived levels of comfort with their Māori identity and being in a Māori setting.

The Likert-scale type questions were aimed at providing a broad overview of student experiences and perceptions of some main issues. Also of interest were the relationships between different experiences and perceptions, as indicated by correlation coefficients. The Likert-scale questions also facilitated comparisons and trend analyses over the coming years.

Table 2 provides an overview of the responses and it is apparent that several results stand out positively. Close to two thirds of Māori first-year students report that they were satisfied with their academic experiences, and 90% that they were happy with their experiences overall at the University of Otago. Nearly two thirds also report that the majority of their courses were at the right level of difficulty.

Of concern is that 17% of respondents report that they have often thought about leaving university. Also of concern is that 42% reporting finding it difficult to ask for help from academic staff and 41% did not know where to go to discuss their future course of study.

Of interest is that three quarters of respondents felt comfortable with their Māori identity and just over 53% confident in a Māori setting. More than half of the respondents reported that they were happy with the academic support for Māori students at the university. However 21% felt that the university could do more to support the social and cultural needs of Māori students.

In order to reduce the number of variables for further analysis, we used a factor analysis approach (Principal Components, varimax rotation). This revealed six factors. It appeared that there is a strong relationship between student satisfaction and the degree to which they felt prepared, had a sense of what university would be like and had their expectations met. The scores on these questions, on the other hand, are inversely related to students' reported thinking about leaving university. Further analysis also revealed a statistically significant relationship, although less strong ($F_{(2,130)}$=6.53 versus $F_{(2,130)}$=16.02), between students who reported thinking of quitting and workload and concerns about course difficulty. Table 3 shows the loading of questions on the six factors.

Based on this result we created six scales which had strong to very strong Cronbach Alpha (α) coefficients for reliability (Table 4). This indicates that the six questions that compose the scale can be considered as valid questions to assess a particular concept, such as factor 1 representing "satisfaction", or factor 5 representing "Māori support". It should be noted, however, that not all scales comprise of the same number of questions.

**Table 2. Student response to given statements on a 5-point scale
(5 = strongly agree; 1 = strongly disagree)**

Statements given for students to respond to	Strongly disagree	Neutral	Strongly agree	Mean n=135
I was clear what university study would be like before I came to Otago.	37%	25%	38%	3.01
I was well-prepared for university study by my previous educational experiences.	28%	31%	41%	3.20
So far, study at university has been what I expected it to be.	23%	29%	48%	3.34
My academic experiences at university so far have been positive.	11%	26%	64%	3.68
The workload is what I expected it to be.	24%	29%	47%	3.25
The majority of my courses are at the right level of difficulty.	12%	23%	65%	3.72
The workload in the majority of my courses has been alright.	19%	28%	53%	3.42
I have regularly sought help for my studies.	39%	33%	29%	2.88
I find it easy to ask for help from academic staff when needed.	42%	24%	34%	2.98
I have often thought about quitting university.	72%	11%	17%	1.98
I know where to go to discuss my future course of study.	41%	22%	37%	3.01
It is easy to get help with my academic courses when I need it.	20%	31%	49%	3.47
Academic staff generally make it clear what is expected of us.	10%	30%	60%	3.68
I find it easy to ask for help from support staff at university when needed.	29%	35%	36%	3.14
I know where to go when I want advice about what courses to enrol in.	31%	23%	46%	3.32
The university could do better in providing academic support for Māori students.	56%	32%	12%	2.45
The university could do better in supporting the social and cultural needs of Māori students.	43%	26%	21%	2.73
Overall, I am happy with my experiences at the University so far.	2%	8%	90%	4.46
I feel confident in a Māori setting.	16%	31%	53%	3.56
I feel comfortable with my Māori identity.	11%	14%	76%	4.13

Table 3. Loadings results for principal component analysis (above .40)

Closed questions	Factors					
	1	2	3	4	5	6
So far, study at university has been what I expected it to be.	.759					
I was clear what university study would be like before I came to Otago.	.744					
I was well-prepared for university study by my previous educational experiences.	.686					
Overall, I am happy with my experiences at university so far.	.635					
I have often thought about quitting university.	-.624					
My academic experiences at university so far have been positive.	.525		.468			
I know where to go when I want advice about what courses to enroll in.		.834				
I know where to go to discuss my future course of study.		.790				
Academic Staff generally make it clear what is expected of us.		.768				
It is easy to get help with my academic courses when I need it.		.712				
I find it easy to ask for help from academic staff when needed			.827			
I have regularly sought help for my studies.			.737			
I find it easy to ask for help from support staff at university when needed.		.480	.617			
The majority of my courses are at the right level of difficulty.				.811		
The workload in the majority of my courses has been alright.				.803		
The workload is what I expected it to be.				.656		
The university could do better in supporting the social and cultural needs of Mäori students (reverse coded).					.875	
The university could do better in providing academic support for Mäori students (reverse coded).					.868	
I feel confident with Māori identity.						.913
I feel confident in Māori setting.						.783

Table 4. Scale characteristics

Scales	Items	α	n	Mean
1 Satisfaction	5	.79	133	3.54
2 Advice	4	.84	133	3.37
3 Help-seeking	3	.76	132	3.00
4 Workload	3	.79	133	3.46
5 Māori-support	2	.76	135	3.41
6 Māori-identity	2	.75	133	3.85

The scale mean for respondents' reported confidence in "help seeking" was the lowest with a mean of 3.00 (Table 4). Upon looking closer at the individual scores of the questions that make up the scale, we can see that only a third of the respondents reported being quite comfortable asking academic staff for help, and more than 40% of the respondents seemed to indicate that they felt this was difficult for them.

There were few significant differences between the scale means of the different groups in our sample. Male students were overall more satisfied, but thought the university could do more to support Māori students. Students from the commerce and humanities divisions in the university also considered that the university could do more to support Māori students.

We next explored the relationships between the scores on the different scales. The results suggest that there is a significant relationship between students' consideration of their workload (at the right level and at the level they expected it to be), their ease in finding and asking for help and their general satisfaction with their academic experiences. Students who reported that they had changed their degree during the year reported lower satisfaction levels and also scored lower on the workload scale.

Table 5. Correlation between scales

	Advise	Satisfaction	Help-seeking	Workload	Māori support	Māori-identity
Advise	1					
Satisfaction	.340**	1				
Help-seeking	.466**	.244**	1			
Workload	.373**	.546**	.287**	1		
Māori support	.068	.129	–.002	.091	1	
Māori-identity	.265**	.065	.391**	.021	–.076	1

** significant p< .01

We also found that students' reported 'level of comfort' with their Māori identity correlated with their reported ease and ability to seek and find advice and help.

To explore respondents' use and experience of the various learning related services, we examined the ratings of those services and how many respondents used them. Te Huka Mātauraka (THM) offers a mentoring programme, tutorials for first-year papers, a drop-in study facility and an orientation programme in the beginning of the year. The two most used programmes were the mentoring and tutorial programmes. Nearly a third of the respondents

used these and clearly valued them. Nearly two thirds had also taken part in tutorials organised by the residential colleges. Workshops in the Student Learning Centre (SLC) were attended by some of the respondents. Results are shown in Table 6.

Table 6. Learning-related programmes

	N	Minimum	Maximum	Mean	Std. Deviation
THM mentoring	41	1	5	4.34	.990
THM tutorials	45	1	5	4.73	.688
THM drop in	27	2	5	4.54	.811
THM orientation	10	3	5	4.30	.823
SLC workshops	23	1	5	3.86	1.246
College tutorials	82	1	5	4.20	.881

We further explored this relationship by considering students' scores on the Māori identity scale and their use of these services. ANOVA analysis only revealed differences for the THM mentoring programmes ($F_{(2,130)} = 8.308$, $p < .001$) and the tutorial programme ($F_{(2,129)} = 9.073$, $p < .001$). Bonferoni's post-hoc analysis indicated that the differences in both these results were between those students who knew about those services and had used them (n=41) and those who also knew about them but had not used them (n=61). Table 7 shows the difference in means between the groups.

Table 7. Means differences by use of programme

	THM Mentoring programme N	Māori identity scale mean	Std. Deviation	THM Tutorial programme N	Māori identity scale mean	Std. Deviation
never heard of	31	3.678	1.029	23	3.76	.890
heard of but never used	61	3.60	.991	64	3.54	1.070
heard of and used	41	4.34	.778	45	4.31	.733
Total	133	3.85	.991	132	3.84	.993

There was no statistically significant relationship between scores on the help-seeking scale and students' participation in the mentoring.

Lastly, we sought to identify experiences that yielded statistically significant ($p<.05$) different results for the scales and were not revealed through other analysis procedures. We did this by using the categorised answers (see Table 2: agree, neutral and disagree) to individual questions, and considering inter-question correlations.

In addition to already reported workload related relationships, further relationships came to the fore. Those who were less clear about what university would be like before they came to Otago, and those who felt less well prepared by high school, considered the workload less favourable and found it less easy to get course advice. Those who felt that the workload was

not at the right level also reported to be less confident in seeking help. Those students who reported that they had thought about quitting university also rated their workload less positive, and were overall less satisfied with their university experiences.

Help-seeking questions also yielded some additional insights. Students who responded positively to the questions "I find it easy to ask for help from academic staff when needed", and "It is easy to get academic help with my courses when I need it" had higher scores on all other scales and were satisfied with the help for Māori students at the university. These questions also correlated significantly to respondents' answers to the question "Academic staff generally make it clear to us what is expected of us". On the other hand, these questions were inversely correlated with those students who had often thought about quitting university.

Discussion

Students' responses to questions related to their study and support expectations and experience, suggest that they were overall satisfied with their experiences at the university. However, some issues could be discerned around academic workload and respondents' confidence to ask for help. Their sense of preparedness, understanding of what university would be like and their thoughts about quitting university seemed to be related to these issues.

Interestingly, the proportion of students who had considered leaving reflects the approximate annual first to second year attrition rate at our university for the last few years. This does not mean that students who reported that they had thought about quitting will actually leave. As the survey was conducted in September, it is likely that some of them will not have come back for their second year, but others may have already left during their first year of study. There is evidence to suggest that many first-year students make up their mind about leaving within the first few months, although not all actually leave until the end of the year (McInnis, James, & McNaught, 1995). This cannot be verified as the participants in this survey were anonymous.

Workload did not appear to be a major issue for Māori first-year students at this university. However, first-year student concerns with their academic workload are well-documented in the literature. Zepke et al. (2005) in their New Zealand study, identified "workload" issues as the principle common factor amongst all the institutions involved in their research. Their findings suggest that academic workload issues were related to time management and student challenges related to their first year at university. This reflects studies in other countries (Haigh, 1999; Kantanis, 2000; Maguire, 2001; Prescott & Simpson, 2004; Ramsay, Barker & Jones, 1999; Sidle & McReynolds, 1999; Smith, 2003). In their study with first-year students at the University of Ulster, Lowe and Cook (2003) reported that 21% of the students at the end of two months had experienced greater difficulty with self-directed learning than they expected, whilst a third reported that they were experiencing some difficulties with this. A recent study conducted amongst first-year students in the UK (Yorke & Longden, 2007) also suggested that time-management was a concern.

The degree to which universities have a role to play in students' time management issues, however, is contested. Yorke and Longden (2008) categorised the open question responses related to time management as "student responsibility", rather than 'institutional responsibility" or "dual responsibility". Zepke et al. (2005) suggest that institutions should look at the workload of students. However, we argue that the issue may not be workload per se or that students do not have the 'right' time management skills on entry to the university. It may well reflect that studying in university is distinctly different from studying at high school. In the research of one of the authors, (van der Meer, 2008) for example, students reported difficulties in understanding what was expected of them regarding academic readings and how to keep up with all the readings. What students indicated was that they were willing

to do the work, but that they were not sure how to use their time outside structured classrooms—they reported little or no guidance about this. Therefore there is a role for institutions to assist first-year students to develop time-management skills that are appropriate to a higher education context.

Seeking help from academic staff is an issue that also surfaced in other projects by other researchers. Although seeking help might be considered a generic skill that is not context-specific, this may not necessarily be the case. Students who have arrived from high school have to adjust their expectations based on previous experiences. Haggis and Pouget (2002), in their study of first-year students found that students were sometimes reluctant to ask for clarification. Students in their research linked this to high school habits of not wanting to draw attention to themselves. In the research of one of the authors (van der Meer, 2008), students had to get used to how help-seeking works, and what was appropriate and possible within the different teaching and learning environments of their courses. There did not seem to be one accepted 'rule', instead there were different 'rules' for each course. Although 'explanations' for some of these differences could be sought in individual idiosyncrasies, particular circumstances, or in different pedagogical approaches, the data in his project also seemed to suggest that teachers' responses to students' requests for help or clarification could be reflective of certain perceptions of students' motives. These could include students being suspected of not having tried solutions themselves, or just wanting to have an easy and convenient way to get answers. In other words, wanting too much and wanting it too easy. Furthermore, resource constraints could be considered as impacting on the differential ways in which teachers respond to students seeking help. The pressure on permanent staff to spend more time on research and publications to perform well in the Performance Base Research Funding (PBRF) exercise, for example, could have put further stress on the time of teachers. Reports on Māori support in Waikato University (Hunt et al., 2001; Nikora et al., 2002; Rua & Nikora, 1999; Waikato University, 2002) suggest that some of their Māori students felt whakama (ashamed) about asking for help. At this stage we cannot report whether students in our project had similar sentiments. Analysis of interview and other survey data may well shed more light on this.

With regards to the second focus of this paper, how students' responses relate to their self-reported confidence with their Māori identity, it can be suggested from the results that there was a relationship between students' reported help-seeking behaviour and their Māori identity; this in turn was related to their participation in TMH tutorials. In other words, a high score on the Māori identity scale also meant a relatively high score on the help-seeking scale; more students with a high score on the Māori identity scale used those services. However, counter-intuitively, there is no relationship between students who used the mentoring and tutorial programmes and a higher score on the help-seeking scale. That suggests that accessing those services does not necessarily lead to higher self reported confidence, but is a pre-condition of accessing them.

In conclusion, there are some indications of the areas that may benefit from further exploration, especially workload management and help seeking. Analysis of the qualitative data sources may well shed more light on these areas. These areas of concern also surface in other literature related to first-year students. Addressing some of the challenges does not necessarily suggest that students need to change, but that institutions may need to examine whether and how students are orientated towards the expectations of the university. Institutions may also need to consider whether development of generic academic skills, such as university-type time management, should be embedded into the first-year curricular design. The role of identity in accessing available support structures may also need to be further explored. Universities may well be able to play a more significant role in nurturing and/or developing students' engagement with ethnicity-based support structures.

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Author Notes

Jacques van der Meer is a Senior Lecturer Student Learning Development, Higher Education Development Centre – Te Wahanga Whakapakiri i Te Whare Wānanga o Otago (University of Otago), Ōtepoti (Dunedin).

Stephen Scott (Ngāti Whatua, Te Uri o Hau) is Kaitautoko Whakamātau, Te Rohe ā Ahikāroa (Division of Sciences), Te Whare Wānanga o Otago (University of Otago), Ōtepoti (Dunedin).

Tia Neha (Ngāti Porou, Nga Puhi, Te Whānau a Apanui and Ngāti Kahungunu) is a Research assistant, Te Whare Wānanga o Otago (University of Otago), Ōtepoti (Dunedin).

E-mail: jacques.vandermeer@otago.ac.nz