

Bridging Education in New Zealand

A Pathway to the Future

**Proceedings of the 8th Conference
of the
New Zealand Association of Bridging
Educators**

9-10 October 2008

**Edited by
Rae Trewartha**

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*Waiariki Institute of Technology, Rotorua, New Zealand.
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Introduction

Held in Rotorua, at Waiariki Institute of Technology on October 8 and 9 2008, the theme for the 8th annual conference of the New Zealand Association of Bridging Educators was *Bridging Education – A Pathway to the Future*. With the global economic downturn just starting to bite, this turned out to be a very apt theme for a conference involving this sector of tertiary education. As the young, and not so young, have found their options for work reduced, many have turned to bridging education to help broaden their choices. While this has led to strong growth in the sector, it has also presented educators with new challenges, particularly in regard to the increasing numbers of younger students entering our programmes. Thus, the opening keynote, *The Joy and Responsibility of Teaching Well*, presented by Dr L. Dee Fink – a prominent United States educator in the area of significant learning and integrated course design – was very timely, in that it addressed issues of: “What we Teach, How we Teach, How we ‘Gear Up’ to Teach and Who we Are”. His workshop on Team Based Learning also provided conference attendees, of whom there were more than 120, with further useful tools for engagement. Professor Eleanor Ramsay – Adjunct Professor at the University of South Australia Hawke Research Institute for Sustainable Societies – in presenting the keynote on the second day, explored the current framework for equity work in Australian higher education and the role and place of bridging education within this overall context. Her presentation provided much food for thought in regard to the way New Zealand addresses equity issues in higher education.

These edited papers and workshop accounts from the conference showcase the caring, dedication and professionalism of educators working in Bridging Education in New Zealand and Enabling Education in Australia. *Elana Taipapaki Curtis, Sonia Townsend, Tanya Savage and Airini* present findings from phase one of their two-year study looking at non-lecture teaching practices and their ability to help or hinder success for Maori and Pasifika students, while *Catherine Dickey, Bert Henry, Leafa Luatua, Carolyn Mayo, and Catherine Russell* examine retention and success from the perspective of a programme based on respect for student motivation and life experiences and grounded in the academic milieu of a supportive community. *Dr Teresa Fernandez* looks at the way curricula is developed by bridging educators. Highlighting the high degree of review that takes place, she explores the issue of how bridging courses are actually developed and notes the lack of research in this area. In a paper exploring issues for Chinese students coming to study in New Zealand, *Julie Hardie* presents research that examines the appropriateness for the New Zealand tertiary education situation of the learning strategies and personal behaviours the students bring with them. *Dr Barry Hodges* compares the success of two different enabling programmes at the University of Newcastle and examines the contrasting strategies used by the two programmes, arriving at a conclusion that contradicts his expectations. Adult bridging students’ self-perceptions of the level of skills they believe they will need and their readiness for future study are examined in research presented by *Ian Wilson*. While he found a high level of confidence, he believes further research is needed to gauge the accuracy of this self-perception.

Leigh Anderton's account of working with bridging students on a printmaking project provides an interesting insight into the value of contextualising content to meet student's life experiences. *Peter Isaacs, Nick Zepke and Linda Leach* focus on student self management skills and question whether student attrition, and thus lack of success, can be explained using Foucault's concept of governmentality – does the exercise of power by both groups and individuals influence student success? While *Dr David Powter's* paper describes research that supports the importance of students' attendance at both lectures and tutorials as an indicator of success, he also raises a number of questions for further research.

Paul Satherley and Anne Lee, from the Ministry of Education, present a summary of the results from New Zealand's participation in the 2006 Adult Literacy and Life Skills Survey (ALL), which brought to light some interesting statistics eg. a substantial number of people have low *measured* but high *self-assessed* numeracy skills. The role of Adult and Community Education (ACE)-funded programmes, in providing the opportunity for NorthTec to deliver a wide range of courses to students with a huge diversity of learning needs, is addressed in *Jane Scripp's* discussion – these courses have opened doors to people who, otherwise, would not contemplate tertiary study. *Jane Terrell* presents an overview of the evaluation findings that resulted from feedback garnered from participants in the Tertiary Education Commission's (TEC) professional development clusters, which were aimed at upskilling lecturers and managers in the skills required to embed literacy and numeracy teaching in their programmes. She provides compelling feedback from the chalkface in support of this initiative.

Rae Trewartha
Unitec Institute of Technology
November 2009

Success For All: Improving Māori and Pasifika Student Success in Foundation-level Study

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‘Success’ in degree-level studies is yet to be understood from the perspective of Māori and Pasifika learners. Without this we cannot be sure that our teaching approaches are delivering success for our students. *Success for All* is a TLRI-funded University of Auckland multi-academic and service centre research project that is attempting to resolve these issues, based on extensive interviews with Māori and Pasifika students (using the Critical Incident Technique), and teaching and other interventions in non-lecture settings. While evidence has been gathered about lecture-based learning in higher education, little is known about non-lecture teaching activities that complement traditional en masse teaching and their impact on indigenous and minority student success.

This paper describes findings from Phase 1 of this two-year 2007-2008 project, investigating what teaching practices, in the non-lecture context of a foundation education programme, help or hinder success in preparing for or completing degree-level study. Results from interviews with 13 Māori and Pasifika students are discussed, along with an analysis of 247 stories of times Māori and Pasifika students say teaching in non-lecture settings has helped or hindered success in the foundation-level programme. Consistent with the Critical Incident Technique the stories have been analysed, with 11 categories and 18 sub-categories, identifying practices that make a difference to success. Further papers will describe the design and implementation of interventions in these settings, using toolkits of good practice from the *Success for All* research, and findings from Phase 3 including post-intervention interviews with foundation students.

Introduction

It is widely recognised that detailed research is needed to uncover the complexities of teaching and learning in university settings. While some evidence has been gathered about lecture-based learning in universities, little is known about non-lecture teaching activities that complement traditional en masse teaching.

Success for All is a two-year evidence-based project that commenced in January 2007 in four different contexts (Faculty of Education, Faculty of Medical and Health Sciences, National Institute of Creative Arts and Industries) in a New Zealand university of more than 35,000 students. Researchers and educator-researchers work together to better understand teaching and learning in non-lecture contexts, and to utilize evidence to enhance their practices. Of particular concern for the *Success for All* research, is understanding what teaching practices in non-lecture contexts help or hinder Māori and Pasifika student success in preparing for or

¹ The *Success for All* team comprises staff from three Faculties (Faculty of Education, Faculty of Medical and Health Sciences, National Institute of Creative Arts and Industries) and the Careers Centre at The University of Auckland. Team members and contact details are listed at the conclusion of this paper. We gratefully acknowledge the support of the Deans and Director at these sites. This project is funded by the New Zealand Government through the Teaching and Learning Research Initiative (www.tlri.co.nz). The support of the TLRI Coordinators is respectfully acknowledged.

completing degree-level study. The identification of good practice is a key goal.

Success for All consists of three phases: the production of critical incidents' narratives with first-year students and graduates (including 'graduates' of foundation education; and students who have used careers services and gone on to graduate); a professional development intervention, integrating 'toolkits' of good practice identified through the analysis and interpretation of the narratives; and the production of critical incident narratives with a new cohort of first-year students.

Phase one is characterized by methodological commitments (Kaupapa Māori research methodology and Pasifika research methodology), and the implementation of the research method (Critical Incident Technique). Phase two extends to the design and implementation of interventions in these settings, using toolkits of good practice from the *Success for All* research. Phase three will report on the second round of interviews of students, post-implementation of the intervention.

This paper describes findings from the project's first phase for the Certificate in Health Sciences (CertHSc) foundation programme, which has existed since 1999. The CertHSc is a one-year programme that prepares Māori and Pacific students for degree-level tertiary study in health professions, including nursing, pharmacy, medicine and health sciences. The programme is designed to enable students to bridge the gap between secondary school studies and university. Students are introduced to concepts in physics, chemistry, social sciences, human biology, Māori health, Pacific health, and academic and professional development.

The CertHSc has a Māori-specific recruitment project called Whakapiki Ake that has been in place since 2003. This project has actively recruited and successfully increased the number of Māori students entering the CertHSc. The project has also undergone significant changes in recruitment focus over the last one to two years in order to reduce Māori attrition and student/programme mis-match.

Graduation from the CertHSc programme, with an appropriate Grade Point Average (GPA), facilitates entry into the Overlapping Year One (OLY1) necessary for training within the health professional programmes offered by the Faculty of Medical and Health Sciences.

Māori and Pacific students are accepted into the CertHSc via the Māori and Pacific Admission Scheme (MAPAS), which provides both academic and pastoral support for CertHSc students, including peer support and tutoring/mentoring at both an individual and group level.

Research Questions

This research has two main aims. Firstly, to identify factors in non-lecture teaching and learning that help or hinder Māori and Pasifika student success; secondly, to produce practical programmes for tertiary institutions on how to identify what helps and hinders Māori and Pasifika student success in preparing for or completing degree-level studies, and how to develop effective programmes to harness the strengths and address barriers.

To achieve these aims, four core research questions guided the *Success for All* project:

- What teaching practices in non-lecture contexts help or hinder Māori and Pasifika success in foundation-level study?
- What changes does research in this area suggest are needed to teaching

and university practices in order to best support Māori and Pasifika success in foundation-level studies?

- Can such changes have an impact on what students say about what teaching practices in non-lecture contexts help or hinder Māori and Pasifika success in foundation-level study?
- What does 'success' mean in pre-degree level study – from Māori, and Pasifika perspectives?

Research Assumptions

Four core assumptions drive the design and implementation of the *Success for All* research project.

Success is more than we think: 'Success' includes movement towards, and achievement of, pass grades or higher, a sense of accomplishment and fulfilment of personally important goals, and participation in ways that provide opportunities for a student to explore and sustain their holistic growth. The concept of 'success' is a broad one that links with individual and community notions of potential, effort, and achievement. With respect to the CertHSc, success is seen as being both within and following the foundation context. Therefore, success in this context refers not only to students passing the CertHSc but also to how well students are prepared for success in their first year of degree-level study.

Non-lecture teaching happens and is important: Teaching and learning in degree-level studies happens in mass lectures to 50 or more students, and in complementary non-lecture settings that can be as personal as one-to-one. Teaching can be provided by a lecturer who presents as a knowledge expert, but can also be provided by the tertiary educator who is a resource person and facilitator (Monks, Conway & Ni Dhuigheain, 2006) or by academic support staff (Airini and Sauni, 2004).

Professional development happens best through an ethic of partnerships for informed practice: Changes to teaching and learning practices can be progressively adopted to ensure deep levels of understanding and quality practices. In addition, the professional development must provide situations where educators are shown, and are able to practice in an on-going supportive manner, strategies that will change classroom interactions (Bishop et al, 2003).

To teach to a broad section of students, higher education providers must understand their students: Māori and Pasifika peoples are distinct population groups, with both overlapping and unique educational priorities. There is diversity both within and between the groups. Pasifika, for example, comprise peoples who link to dozens of Pacific nations, both directly or indirectly. There is also diversity in student profiles. Māori and Pasifika students enter degree-level study as school-leavers, as graduates of foundation education programmes and as mature-age adults. Research needs to recognize that Māori and Pasifika peoples take different routes into university education, with different attributes and issues, at both the individual student and group levels.

Research Methodologies

A key distinguishing element in this research is the integration of Kaupapa Māori

Research and Pasifika Research methodologies and analytical frameworks.

Kaupapa Māori research

‘Kaupapa Māori Research’ (KMR) is now a well-established academic discipline and research methodology (see, for example, Smith, 1999). KMR locates Māori at the centre of enquiry. It has, of necessity, an understanding of the social, economic and political influences on Māori outcomes and is able to use a wide variety of research methods as tools. It is about understanding those power dynamics that create and maintain the unequal position of Māori in New Zealand society, including the role that the education system plays in expanding or limiting Māori student success (Curtis, 2007).

The commitment to Māori Research Protocols means ensuring that KMR practice is embedded in the research design, implementation, analysis, report writing and dissemination.

Pasifika research

‘Pasifika research’ is a recognised and evolving construct (Health Research Council, 2004; Ministry of Education, 2002) concerned with the well-being and empowerment of Pasifika peoples within New Zealand. Consequently, fundamental to Pasifika Research is an acknowledgement of the tangata whenua (‘people of the land’; first nation) status of Māori and an affirmation of the teina-tuakana (kinship with certain roles) relationship of Pasifika and Māori within the Aotearoa New Zealand context. In addition, there is an affirmation of the ancient whānaungatanga (extended family relationship), of tuakana-teina within the Pacific region (Health Research Council).

Ethnic-specific differences within the grouping ‘Pasifika’ are respected, recognizing both the possibilities and limitations of the term. In common is the central importance of principled relationships to all ethical research practice. This is a perspective that requires using Pasifika world-views as the reference points. The development of relationships with Pasifika peoples in the research context can be expressed in ‘guiding principles’ (Health Research Council, 2004, p. 2) – respect, cultural competency, meaningful engagement, reciprocity, capacity building.

Research protocols

In practical terms, the integration of KMR and Pasifika Research protocols means undertaking research that:

- Seeks and utilises Māori and Pasifika input at all stages of the research and uses consultative and participatory processes;
- Proceeds in a manner appropriate to the cultural contexts concerned and ensures that language is not a barrier to participation;
- Ensures that members in the research team acknowledge cultural limitations, and work in culturally safe ways;
- Ensures that all aspects of the research are monitored closely for safety and relevance, both by our researchers, and community-based interviewers;
- Ensures that researchers with Māori research expertise in KMR and Māori education are available for working with Māori participants; and
- Ensures that researchers with Pasifika research expertise are available for

working with Pasifika participants.

Research method: Critical Incidents Technique

As an established form of narrative inquiry, the Critical Incident Technique is used in this project to reveal and chronicle the lived experience of Māori and Pasifika students preparing for or completing degree-level studies. As Bishop and Glynn (1999) have shown, narrative inquiry provides a means for higher levels of authenticity and accuracy in the representation of Māori and Pasifika student experiences, through being grounded in a participatory design. The students are able to 'talk their truths rather than present the "official" versions' (Bishop, 1998; Stucki, Kahu, Jenkins, Bruce-Ferguson, & Kane, 2004).

The Critical Incident Technique is a form of interview research in which participants provide descriptive accounts of events that facilitated or hindered a particular aim. As conceptualized originally, a critical incident is one that makes a significant contribution to an activity or phenomenon (Flanagan, 1954). The critical incident is a significant occurrence with outcomes. The research technique facilitates the identification of these incidents by a respondent. The resultant student 'stories' are collaboratively grouped, by similarity, into categories that can encompass the events and then guide the co-construction of professional development initiatives and the Quality Tertiary Teaching (QTTe) Toolkit to improve teaching and learning practices.

Participants are asked, firstly:

- Can you describe a time when the teaching and learning practices have helped (or hindered) your success in foundation-level studies?

A complete incident story comprises three parts: trigger (the source of the incident), associated action, and outcome. Identification of each component part facilitates the grouping of the incidents into 'categories' of incidents that seem similar. Each identified incident meets the following criteria:

- (1) Is there a trigger for the incident? An associated action? An outcome?
- (2) Can the story be stated with reasonable completeness?
- (3) Was there an outcome bearing on the aim of the study?

At the conclusion of the scrutinising processes (which the research team undertake collaboratively and independently), categories emerge that accommodate the incidents described in the sample group of interviews.

The following questions tested the soundness and trustworthiness of the category system:

- Can the researchers, working independently of each other, use the categories in a consistent way?
- Are the categories comprehensive?
- To what extent, and in what ways, are the categories consistent with expert commentary on good practice in non-lecture teaching situations and learning in tertiary settings?
- To what extent, and in what ways, are the categories consistent with previous research on best practice in non-lecture teaching and learning situations in tertiary settings?

Each participant is interviewed for 40 minutes (allowing for additional time to establish rapport and complete the interview appropriately).

Implementation: CertHSc Participants

In 2007, 13 interviews were undertaken with four Māori and nine Pacific students, who were either current or post-CertHSc students (in the immediate year post-CertHSc completion).

As indicated by Smith (2006), meta-analysis of narrative research methods suggests that after eight participants, some repetition of story types can be anticipated. Researchers in indigenous and general education, using the Critical Incident Technique with underrepresented groups, have tended to interview and report on between 10-32 participants (McCormick, 1994; Airini & Brooker, 1999), to ensure highest possible levels of trustworthiness. *Success for All* is based on interviews of a minimum of eight participants. The initial plan was to interview 12 each of Māori and Pasifika, from both current and ex-CertHSc cohorts. However, Māori and Pasifika student participation numbers, and individuals' availability for interviews, coupled with the volume of incidents generated from actual participants, led to an adjustment of the number interviewed in Phase 1, as noted above.

In late 2008, Phase 3 interviews will take place aiming for 8-12 Māori and 8-12 Pasifika students currently enrolled within the CertHSc.

Results

From 13 interviews, 247 incidents were recorded when Māori and Pasifika students experienced teaching in non-lecture settings has helped or hindered success in foundation-level study. Analysis of the incidents produced 11 categories and 18 sub-categories. Each incident was classified in one category only. In some cases the sub-categories were reported by more than one incident (Table 1)

Table 1
Categories and subcategories for CerHSc Phase 1 interviews (total number and percentages)

	Subcategories (n=18):																				
	Teaching staff (availability, style, consistency)	Tutorial style	CerHSc course content	Cultural activities within curriculum		Study Group (staffing/resources provided)	Academic/pastoral support provided	Resources provided	MAPAS Tuakana/Teina	CerHSc Programme	Multiple Learning Media Used	Culturally appropriate study interventions	External support (Family/Church)	High Māori Attrition	Independent learning	Mature student learners	MAPAS Camp (Whakawhanaungata)	Tutorial style in OLY1	Tuakana Programme in OLY1	Totals (per category)	Percentage (categories) *
Categories (n=11):																					
Teaching Methods	10	17	4	1	6		2			5								1	1	47	19
Preparation for OLY1	10	3	9		4	7		2	6						2			1		44	18
Encouraging/ mentoring good study methods	5	9	5	4	4	2	4	6		1					1					41	17
Learning Environment	10	5			1	1	6	1	3	1	2	4				2				36	15
Student Motivation/ Confidence	6	1	5	3		3	1	1	2	4		2				1				29	12
Cultural Pride/Mana			1	10										2			1			14	6
Experiences in OLY1	3	2				1		1							3					10	4
Class social cohesion				4	1			1									2			8	3
Determinants of Attendance	3	1		1					1								1			7	3
Student unprepared for tertiary study	2						1		1							3				7	3
Whakapiki Ake Recruitment														4						4	2

* Percentages have been rounded to the nearest whole number

Interviews identified eleven categories that can be used to review teaching and learning practice to support Māori and Pasifika student success: teaching methods, preparation for OLY1, encouraging/mentoring good study methods, learning environment, student motivation/confidence, cultural pride/mana, experiences in OLY1, class social cohesion, determinants of attendance, student not prepared for expectations of University study and Whakapiki Ake recruitment.

Table 1 shows that the highest proportion of reported incidents was in the category of 'Teaching Methods' (19%), and 'Preparation for OLY1' being next most

frequent (18% of all incidents). The four most frequently reported categories affecting student success relate to what tutors and teachers do.

Each category is discussed below in order of highest frequency and incident examples are provided below.

Category 1: Teaching methods

'Teaching methods' refers to the ways in which the course content is taught in non-lecture settings, staffing, course content and programme design. Eighty-five per cent of the teaching methods identified in the 47 incidents from participant interviews were represented as being helpful for student success. In two cases, a teaching method could be both helpful and hindering [CertHSc course content, and teaching staff (availability, style, consistency)]. 'Tutorial style' was the most frequently reported factor of teaching methods (36%) identified as helpful. Nine sub-categories were identified (Table 1).

Example 1: Helpful practice

Trigger: I remember one time, the tutor, everyone was really quiet and he was trying to teach us, go through the lecture with us.

Action: so what he does was he went through what each one meant, how they related to each other and how they make each other work.

Yeah and he went through that whole process and he made sure that we understood before we moved on so if you understood that, we moved on and as we moved on he gradually built on what we knew previously.

Outcome: In that 45 minutes I knew three-quarters of that one paper.

Example 2: Hindering practice

Trigger: Yeah like I've kind of grown up as like you know be respectful, when you're told something you're just supposed to take it in so I was just like I will just try and take it in, try and understand and not talk back or ask questions.

Action: No because you're supposed to understand, like sit there and understand and I sat there for a whole hour and be like I'll just take it in and try and understand or try and read it later.

Outcome: If I leave straight away and study it but then, I'll try and I'll probably understand a little bit but then not completely.

Category 2: Preparation for OLY1

This category refers to the ways in which the students see themselves being prepared for their next year of study. Just over half of the 44 incidents reported in this category were seen as hindering student success. Nine sub-categories were identified (Table 1).

Example 1: Helpful practice

Trigger: We had a camp at the beginning of the year just before school was going to start and this was for the, for all the certificate students.

Action: We had the third-year and second-year med students and some of the nursing students that came into say be our leaders, our team leaders.

Outcome: It's just as well we had a camp to get together and our leaders at the camp had taught us what to expect at Uni, you know the people

there, the lecturers, like the boring lecturers and stuff like that. So they gave us hints on Uni life and we were just amazed by it.

Example 2: Hindering practice

Trigger: Okay, well it was really good but I do worry a little bit that I found it too easy this year and so next year I'll be in over my head.

Action: There was all that extra support there for you if you wanted it.

Outcome: I'm a little bit worried because I know we're kind of like hand fed this year, I know that, say next year, is going to be a hell of a lot harder but it's going to be quite different because how much help do they give you second year?

Category 3: Encouraging/mentoring good study methods

All 41 incidents in this category were seen as being helpful in supporting success, with nine sub-categories identified (Table 1).

Example: Helpful practice

Trigger: We'd revise together.

Action: Sometimes we booked a break out room at the Tamaki Campus and we'd revise together, like we'd revise a topic together and write it on the whiteboard and draw pictures. Cue cards. We had cue cards and we'd like test each other and we'd have like a mini pop quiz so it was fun. It's fun when you study in groups rather than by ourselves.

Outcome: Yeah because it's visual yeah and it's more fun. Like we created a more fun way of studying rather than just sitting there and reading.

Category 4: Learning environment

This category refers to practices in which the learning environment helps or hinders Māori and Pasifika success. Eleven sub-categories were identified from the 36 stories provided (Table 1), with teaching staff (availability, style, consistency) being the most frequently reported factor (29% of all stories in this category). All but four of the stories in 'Learning environment' were identified as being helpful factors for Māori and Pasifika success.

Example 1: Helpful practice

Trigger: [Cert] with the staff we have a good relationship so we don't feel intimidated one another so that really helped to approach them.

Action: I guess because the most of them, the majority of them were PI or Māori so it was good. It seemed like we were on the same level of thinking, I mean like we understand each other. We know even though we don't, we kind of know our backgrounds and our weaknesses and strengths so it was good.

Outcome: I reckon it was really effective, it helped me a lot.

Example 2: Hindering practice

Trigger: A general education paper yeah and we chose a Māori paper.

Action: Yeah but it was different too, the first semester it was just Pacific and Māori kids but and we were in Tamaki Campus so it's a small place and then we come to the city and go to this big lecture, proper lecture with other ethnicities it's different.

Outcome: Yeah but it was different too, the first semester it was just Pacific and Māori kids and you're like, I felt comfortable I was okay I can relate to these people you know, sweet as.

Category 5: Student motivation/ confidence

This category refers to an individual's attributes and ways in which teaching practices in non-lecture settings can help or hinder the development of motivation and confidence. Eleven sub-categories were identified from 29 incidents (Table 1). These sub-categories were identified as factors that help success in all cases except 'teaching staff', which was both a helpful and hindering factor, with the former being more prevalent.

Example 1: Helpful practice

Trigger: It's just learning stuff and it's awesome to learn stuff.

Action: I can understand more about the Treaty of Waitangi, we did stuff on it.

Outcome: I feel more passionate about it [Treaty of Waitangi] so when people, when you see something on TV or something has happened and somebody will speak out I feel like, well do you actually know what the Treaty is about, I confront them. Most people have an idea of what it is about and they're quite happy with that idea until somebody turns round and goes you're actually wrong, well not wrong but your interpretation is wrong so I found that a hell of a lot better.

Example 2: Helpful practice

Trigger: [Pacific Health paper] I think it's really important.

Action: You learn a lot of things about your Pacific people and I didn't know any of the stuff about the Pacific people until I did Pacific Health. I didn't know about the whole health section about Pacific people but Pacific Health yeah.

Outcome: I think its really important because I reckon it motivates us – and I think it just motivates the Pacific kids to keep going, I reckon.

Example 3: Hindering practice

Trigger: And I remember coming into class like four minutes late.

Action: And he was like, who are you? Why are you late? And he was like, sit down, right now.

Outcome: Yeah and it was like in front of all my mates and stuff and I was so, so embarrassed, yeah and I was just like oh why did I come, why did I come late, I shouldn't have done it, I should have just not come to class.

Category 6: Cultural pride/mana

Fourteen incidents identified the role of cultural pride and mana as a factor helping or hindering Māori and Pasifika success. The impact of the loss of peers from a cohort was perceived as a negative influence on students. Inversely, the experience of being on camp together and developing a sense of whānau was reported as being helpful for success in preparing for degree-level studies. Four sub-categories were identified (Table 1). The presence of cultural activities in the curriculum was identified as helpful for success in 70% of the stories associated with this category.

Example 1: Helpful practice

Trigger: Well we had a cultural paper and it was the time where we, it was a weekend, it was for assessments but we slept over at the marae, the university one.

Action: The purpose of that was to educate us about Māori and Pacific Island culture, we were discussing the traditional aspects of our past people kind of thing.

Outcome: It was fun, like being part of MAPAS, that was probably the weekend where we actually strongly identified ourselves with our culture

Example 2: Hindering practice

Trigger: But we started the year with 64 and like last week we had maybe four Māori students in a lecture.

Action: Like first semester was good but people start dropping off, especially Māori people whereas all the Pacific students a few of them have dropped off but I think we've ended up with maybe eight Māori students who still come to university regularly and then there's like two or three that come sporadically.

Outcome: It was embarrassing being a Māori student and seeing all the Pacific students coming to school and doing really well and knowing that we're not representing ourselves very well because we're [not] the ones sitting in the lecture we're going to play touch or we come to school for maybe like half a class and then we get bored. So we're leaving.

Category 7: Experiences in OLY1

This category refers to students who have graduated from the CertHSc and undertaken OLY1 studies. Nine of the 10 stories represented experiences in OLY1 as being unhelpful for their success in degree-level studies. Five sub-categories were identified (Table 1).

Example: Helpful practice

Trigger: No because you're supposed to understand, like sit there and understand and I sat there for a whole hour and be like I'll just take it in and try and understand or try and read it later.

Action: They'll send out emails telling us what's going to be in that tutorial so it's best to read over what's going to be in the tutorial.

Outcome: So you can be like kind of prepared so when she goes, when she tells us I'll be like oh yeah I read over this so I can understand it, yeah.

Category 8: Class social cohesion

Students recounted times in which their programme included activities aimed at class social cohesion. All eight stories in this category were helpful for successful preparing for degree-level studies. Four sub-categories were identified (Table 1).

Example: Helpful practice

Trigger: The camp they had at the start of the year.

Action: I thinks really helped coz it meant that we got to know every single person on the course before we started.

Outcome: And so then when we got into the course it was easy like to

get into study groups and things like straight away because we already knew everyone and we didn't have that awkward time like you know at the start of the course where you had to get to know everyone.

Category 9: Determinants of attendance

This category refers to the intrinsic and external factors affecting student attendance at classes. Teaching staff were represented as being a hindering factor in three of the seven incidents. Five sub-categories were identified (Table 1).

Example 1: Helpful practice

Trigger: [B]ut in saying that, I didn't go to the tutorials always.

Action: encouragement from my friends who were going. You know well we're going you should come, its really helpful. We're all going to be there which is good you know.

Outcome: I don't think I would have gone if I had to go by myself or I didn't know anyone. So yeah friends were really good they said they'll be there and we'll study afterwards.

Example 2: Hindering practice

Trigger: [T]hey didn't come to review sessions because they didn't think [the lecturer] was that effective a teacher and stuff like that just because of [the] attitude really. [The lecturer] was really smart and knew [their] stuff and everything like that.

Action: Yeah I think [the lecturer] was a real good lecturer for content and for, like, explaining. Like, [the lecturer] explained things well but just like [their] style whenever you talked to [the lecturer] in tutorials it was like [the lecturer] thought you were dumb and ... was really angry.

Outcome: Not going to the first semester affected, like, we had a test on the first semester.

Category 10: Student unprepared for tertiary study

The disjuncture between expectations and individual preparation are captured in this category. In all four sub-categories [CertHSc Programme, mature student learners, resources provided, teaching staff (availability, style, consistency)] students provided incidents in which their experience in non-lecture settings in this regard had been unhelpful for enabling success.

Example: Hindering practice

Trigger: The thing is I'm confident anyway but I think it was because when I decided to go back to school, I thought about if for a while and thought it would be easy

Action: And when I found out that it wasn't easy it was, I don't know, because the help was there if I needed it but maybe I just wasn't used to asking for it.

Outcome: I guess it wasn't a confidence but who wants to be that person that ends up asking the dumb questions.

Category 11: Whakapiki Ake recruitment

This category refers to the way in which the unique recruitment process for Māori students is perceived to have helped or hindered Māori and Pasifika success in

preparing for degree-level study. In these four stories the recruitment process was perceived as hindering success; being linked directly to the sub-category: 'High Māori attrition'.

Example: Hindering practice

Trigger: All of the Māoris came in under the Whakapiki Ake Project.

Action: A lot of people were just dropping out and the ones that were still there are just like well we'll come when we feel like it.

Outcome: And when you're in an environment when people are kind of you know, no worries, you sort of begin to accommodate that attitude.

Discussion

While evidence has been gathered about lecture-based learning in university education, little is known about non-lecture teaching activities that complement traditional en masse teaching and their impact on Māori and Pasifika student success. This paper describes Phase 1 findings from the two-year *Success for All* project investigating what teaching practices in non-lecture contexts help or hinder Māori and Pasifika success in preparing for or completing foundation-level study. Two sets of observations can be made at this stage in the research process – one about the research method itself, and the second about the Phase 1 findings.

The Research Method

Putting Māori and Pasifika realities at the centre of research. The integration of KMR and Pasifika Research protocols means explicitly advocating research from Māori and Pasifika realities. As a research method, the Critical Incidents Technique is proving to be effective in enabling indigenous and minority group perspectives to be elicited.

The integration of KMR and Pasifika research protocols directly challenges Western notions of what does, and does not, constitute appropriate research. Māori and Pasifika are brought from the margin to the centre; centralising Māori and Pasifika concerns and approaches, so that Māori and Pasifika ways of knowing and therefore researching may be validated.

Learning from extracts, themes, and linkages. It is difficult to know how effectively an interview extract can do in communicating the full experience of a student. The reporting of the research requires the culling of small elements from an overall story. This helps in deriving categories essential to developing professional development programmes. The team's intention is that this practice is to be continued; the principle being that the extracts are the medium towards improved practice and not the message.

Phase 1 findings – CertHSc

Researching to improve university practices and outcomes. The emerging findings illustrate the positive influence of non-lecture based teaching and learning on student outcomes. They also indicate areas in which students can see (and suggest) room for improvement. Each participant has confirmed the importance of non-lecture based teaching for their success and can describe helpful or unhelpful features and experiences in these contexts.

Foundation context of support – when is it too much? A key finding that has

been highlighted by the student interviews includes the concern that the level of support provided by the CertHSc programme, whilst being supportive for CertHSc success, may not prepare them well for success in degree-level study.

This finding reflects the students' own concerns about their perceptions of the level of support provided in the foundation context (very high) and the OLY1 context (relatively low). In addition, given that the aim of the CertHSc programme is to prepare students for both the academic and support environment provided in the OLY1, these findings suggest that, although well intentioned, the intensive level of support provided within the CertHSc has operated to hinder Māori and Pacific student success overall. Data from success rates of ex-CertHSc students in OLY1 support the need to address these issues directly.

In general, Māori and Pasifika success in ongoing study relies on the CertHSc programme's ability to create independent learners who can operate successfully within the OLY1 context. Therefore, these findings support the need to address these issues directly within the CertHSc foundation context and will form the basis of the Phase 2 intervention.

The importance of culturally appropriate curriculum and support activities.

These data highlight the importance of culturally appropriate activities within the CertHSc curriculum and within the model being operated by the MAPAS programme.

The inclusion of Māori and Pacific topics and teaching methods (for e.g. the cultural wānanga/fono) within the curriculum helped students to stay motivated to achieve success, encouraged attendance, enhanced class cohesion and re-enforced cultural pride and mana.

Similarly, MAPAS support activities that utilised culturally appropriate methods, such as the inclusion of kai/food within study interventions and whakawhangaungatanga (family bonding) activities, including regular cohort gatherings for students within culturally appropriate settings, were also seen as helpful factors for Māori and Pasifika student success. Other factors for success included having a MAPAS and CertHSc specific study space/room and a model of tuakana/teina mentoring (i.e. older/younger sibling model) to encourage good study habits and knowledge of university systems.

CertHSc recruitment and admission – the cohort effect. The CertHSc has undergone recent changes in student recruitment and admission processes to address the high level of Māori attrition within the CertHSc programme and what appears to have been a mismatch between student skills and programme suitability (as determined by high failure rates within the CertHSc).

The findings from this research further support these changes and highlight the importance of the cohort or group effect of success on individual learners. This is particularly important for Māori students who experienced the success and failure of fellow Māori students as a cohort and were therefore not isolated from the negative effects of the group failure or non-attendance, even if they were personally succeeding within the programme. Ensuring admission policies that place Māori and Pacific students in positions for success rather than failure is likely to have both a positive individual and cohort effect within a foundation context.

Conclusion

The range of initiatives in *Success for All* is an opportunity for in-depth teaching

practice research into what is quality teaching in non-lecture contexts. The research method has been affirmed as capable of revealing stories within and between population groups' experiences in tertiary education.

Preliminary findings for the CertHSc context have facilitated a critique of the level and nature of support provided within the foundation context for Māori and Pasifika students, highlighted the importance of culturally appropriate curriculum and support activities and reinforced the requirement to review CertHSc recruitment and admission processes in order to enhance positive experiences for Māori students within foundation studies in particular.

Further work will be undertaken to discuss these findings in more detail and present Phase three of the overall project, including the intervention and post-intervention student interviews.

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Ka Whangaia, Ka Tupu, Ka Puawai: Kia Kotahi te Takahi Whakamua

Catherine Dickey, Bert Henry, Leafa Luatua, Carolyn Mayo and Catherine Russell
Manukau Institute of Technology

*Ko Puheke te maunga
Ko Whangatane te awa
Ko Rangaunu te moana
Ko Ngai Takoto te iwi
Ko Waimanoni te marae
Ko Awarau te whānau
Ko Himiona Henry toku tipua matua
Ko Himiona Henry toku papa
Ko Bert Himiona Henry toku ingoa
No reira tena koutou katoa*

Puheke is my mountain
Whangatane is my river
Rangaunu is my harbour
Ngai Takoto is my iwi
Waimanoni is my place to stand
Awarau is our family name
Himiona Henry was my Great Grandfather
Himiona Henry was my father
My name is Bert Himiona Henry
Greetings to you all

*Ko Karioi te maunga
Ko Waikato te awa
Ko Whaingaroa te moana
Ko Kirikiriroa taku kainga
Ko Nga Kete Wānanga te marae
Ko Whare Takiura o Manukau te wahi mahi
Ko Catherine Dickey toku ingoa
No reira tena koutou katoa*

Karioi is my mountain
Waikato is my river
Whaingaroa is my harbour
Hamilton is my birthplace
My place to stand is called Nga Kete Wānanga
I work at Manukau Institute of Technology
My name is Catherine Dickey
Greetings to you all.

*Ko Maungarei te maunga
Ko Niafane te awa
Ko Otara taku kainga
Ko Nga Kete Wananga te Marae
Ko Leafa Luatua toku ingoa
No reira tena koutou katoa*

Maungarei (Mt Wellington) is my mountain
Niafane is my river
Otara is my birthplace
My Marae is called Nga Kete Wānanga
My name is Leafa Luatua
Greetings to you all

*Ko Pukekohe te maunga
Ko Waikato te awa
Ko Ngati Pākehā te iwi
Ko Tuakau taku kainga
Ko Catherine Russell toku ingoa
No reira tena koutou katoa*

Pukekohe is my mountain
Waikato is my river
I'm a Pākehā
Tuakau is where I was born
Catherine Russell is my name
Greetings to everyone

*Ko Christians Cave te maunga
Ko Pacific te moana
Ko Bounty Descendants te iwi
Ko Fletcher Christian toku tipuna
Ko Raymond Pettigrew toku papa
Ko Orise Kelia Quinn toku mama
Ko Carolyn Mayo toku ingoa
No reira tena koutou katoa*

Christian's Cave, (Pitcairn) is my mountain
The Pacific is my ocean
I'm a descendant of the *Bounty*
Fletcher Christian is my ancestor
Raymond Pettigrew is my father
Orise Kelia Quinn is my mother
Carolyn Mayo is my name
Greetings to you all

This paper, *Ka whangaia, ka tupu, ka puawai: Kia kotahi te takahi haere whakamua* (That which is nurtured grows then blossoms: Moving forward together), seeks to describe and evaluate a different approach to retention and success that first values the life experiences of the 'non-traditional' or 'marginalised' student as a learner in a degree programme, from both tauira (student)

and kaiako (teacher) perspectives. It is based in a supportive community, within which ethno-culturally different students can, through concurrent bridging education, develop the academic skills they need, contemporaneously within each of their papers. It is based on the belief that these students already have, within them, life experiences from which the necessary academic skills for degree completion can be established.

For the students, three whakatauaiki describe their experiences of this approach. The first, *Iti rearea teitei Kahikatea ka taea*, which refers to the Rearea, a tiny bird in te Urewera that is able to reach the lofty heights of the Kahikatea tree, one of the tallest trees within te Urewera, underpins the philosophy of their degree, the Bachelor of Applied Social Work (Bicultural). Since the *kahikatea* is a large tree with shallow roots, when it grows separated from others it can easily fall down. By growing in groves, their roots interlace and grow together, giving each other strength and support. So it is, that this second whakatauaiki, *E hara taku toa, i te toa takitahi ēngari he toa taku tini* (My strength is not from myself alone, but from the strength of the group), resonates with the students. Finally, *He moana pukepuke e kengia e te waka*, which suggests to students that if one perseveres then 'a choppy sea can be navigated'.

It is hoped that the collaboration demonstrated between tauira and kaiako in both the preparation and presentation of this paper will encourage others to view bridging education differently for degree study, in that more respect is afforded to student motivation and life experiences, rather than the need for traditional academic qualifications for entry into these programmes.

Whakaatu/Introduction

Manukau Institute of Technology (MIT) was established in 1970 in Manukau City, which has the greatest concentration of Maori and Pacific population in New Zealand. MIT has as its objective: the desire "to provide quality accessible education across a broad range of disciplines at certificate, diploma and applied degree level to meet the vocational needs of students and develop the skills that the Institutes' community needs for the knowledge society" (Manukau Institute of Technology, 2007, p. 26). Underpinning this, is the recognition of the place of the te reo (Māori language) version of the Treaty of Waitangi (Treaty), the partnership document signed in 1840 between Māori and non Māori. Under the Treaty, the Institute has an obligation to "meet Māori educational needs and aspirations emphasising participation, achievement and success" (p. 33). In a similar way, because of its geographical positioning, the Institute has a particular responsibility for people from Pacific nations, to provide them with culturally appropriate and effective educational opportunities that lead to retention, and educational success that fulfils Pacific aspirations. As well, within the Institute's catchment area, there is a multiplicity of diverse, cultural, family realities. Furthermore, often these families inhabit the lower rungs of socio-economic status and their experience in education, for a variety of reasons, is limited and often negative. As a result, there are many people in the district who are potentially 'non- traditional', or 'second chance' learners. The attracting and retaining of these individuals, to and in this Institute, in a context that addresses their bridging education needs whilst respecting their unique world views and counter ing hegemonic processes in education, is both a challenge and an opportunity. The context in which this occurs needs to be one where these students lived realities will be able to find expression. Metaphorically speaking, we have chosen a context that can be likened to the *Kahikatea*.

The *Kahikatea* is a large tree with shallow roots. If it grows separated from others it can easily fall down. Growing in groves, the roots of the kahikatea interlace and grow together, giving each other strength and support. Ideologically, within the

Māori paradigm (ethos/ worldview), the kahikatea metaphorically represents the extended family. More importantly, it highlights that if the Institute was to attract the right people to undertake the new degree, a bicultural Bachelor of Social Work (BASW), then creating a learning context symbolised by *kahikatea* – a place where the students and staff could support each other – appeared paramount.

E hara taku toa, i te toa takitahi ēngari he toa taku tini

(My strength is not from myself alone, but from the strength of the group)

The BASW was developed in direct response to, and in consultation with, Tangata Whenua (Māori) and Tauīwi (non Māori) from the community that the Institute serves. This was a collaborative relationship to address the social environment that exists in the region, where issues like poverty, criminal activity, abuse, etc. fail to be dealt with appropriately because many of those charged with undertaking this work have very different worldviews from those they are expected to assist. The number of workers had to be increased and the training needed radical changes. With over 161 ethnicities, comes the associated social challenges that such diversity may exhibit. Social workers were in great demand and their work was mostly amongst the communities of these 'non-traditional' or 'marginalised' students. Being mindful of this 'community-identified need', there was an imperative to attract and retain men and women who could most appropriately meet the social challenges of the district, that is, individuals from the 'non-traditional' or marginalised populations; some of the same individuals who appear in the negative education statistics.

Through the voices of kaiako and self-selected taura, this paper provides a vehicle in which respect is given to students' life experiences and to the value of embedding academic bridging skills as integral parts of a degree programme.

Hikoi/The Journey

In June 2006, it was decided to convene focus groups of students who were currently in certificate courses in social services and were considering, somewhat apprehensively, moving into degree study in 2007. Two of us were in these social services courses, one studying in the School of Social Sciences and the other in Te Tari Mātauranga Māori. For both of us, participating in a research project was a new experience. We were asked to respond to three questions: What does moving into a degree mean to you? What barriers/concerns do you have about progressing to the degree next year? How do you think the Institute can assist?

Our thoughts and others from the group had many similarities:

We wanted a proper job

Knew we needed to get an education

No-one in our family has been to a tertiary institution

I wondered if I could cope

I felt dumb

My family wanted me to work not study as I had a child

We needed a good grounding in academic writing

... No-one in my extended family has a degree. I'll be the first ... it's a big responsibility. I'm comfortable at MIT but I'll need heaps of academic writing help! I want to get a qualification fast. I'll be the first to keep my mana as Māori. (What do you mean? Keep your mana?)... I know that I'll get sorted academically in a way that won't 'put me down'. It's about epistemology – my way of knowing. Big word for me the fourth form dropout! (laughter) They (Manukau Institute of Technology) think about us and the way we understand things.

... Some words that lecturers use like 'deficit theorizing, trauma, implementation' – some are sort of special words for the subject but others ... are not in my world. I should have known 'trauma'.

I got kicked out of school real early and now want to show my community that people can change and can make a positive contribution to my community.

When you keep on being told you are just another 'dumb Māori' over time you begin to believe it. My greatest challenge will be to get my head and emotions in the right place so that I can believe I can do it.

The responses that were obtained from these groups were analysed and then related to the espoused theories of a number of academics worldwide who have explored concepts relating to adult and lifelong learning principles. Stephen Brookfield (2000, p. 2) has debated the use of the terminology 'adult education' versus 'lifelong learning.' He contends that what is "distinctive about the adult dimension in lifelong learning" could be generalised to four strands: "the capacity to think dialectically, the capacity to employ practical logic, the capacity to know how we know what we know, and the capacity for critical reflection." Of these four strands, it is the fourth, "the capacity for critical reflection", when it encompasses both emotive and cognitive processes, that resonated most with the cohort of BASW students. We found that the student responses in their focus groups (in 2006, 2007 and 2008) contained notions or attributes similar to those described by Brookfield (2000, p. 4) of "impostorship, cultural suicide, incremental fluctuation, community and lost innocence."

It was not until July 2008 that we, the students involved in the BASW, learnt that the comments we made in focus groups, relating to the opportunities and challenges we were meeting in the course of our study, could actually be linked to a whole lot of theory, written by people, that one day we might have to reference correctly using APA! The revelation came when we had a presentation from our lecturer about the conference she had attended in York. In York, she presented a paper about us. That particular morning was hugely exciting. Not only, were our images seen in York, the feedback from those at the conference about our achievements was so positive. For the first time, we felt we had accomplished something. We were proud but humbled. Most importantly, I realised that I was not dumb and I had earned the right to be here.

Throughout the time we have been at MIT, our lecturers have been emphasising the importance of knowing who we are. Lee (1994, cited by Ruwhiu & Ruwhiu, 2005, p. 8) pointed out that: "cultural knowledge and empowerment

involved the strategy of embracing one's own culture and using it to understand and make sense of new knowledge and other people". For tangata whenua and other Polynesian peoples, wellness involves more than that which is related to the physical. To be 'well' in these worldviews requires that all aspects of an individual's life be in balance: taha wairua (spiritual), taha tinana (physical), taha hinengaro (mental and emotional) and taha whanau (family). The importance of this interconnectedness of human attributes for tangata whenua and other Polynesian people, therefore requires a different approach to education and training so that a more culturally appropriate social service worker can be provided (Durie, 1998; Ruwhiu, 2005).

At MIT, we have some difficulty with the terminology used by Brookfield (2000, p. 4), in that terms like "impostorship, cultural suicide and lost innocence" become negatively personalised in our context; a context where a person's collective ethno-cultural identity (Figure 1) is extremely important.

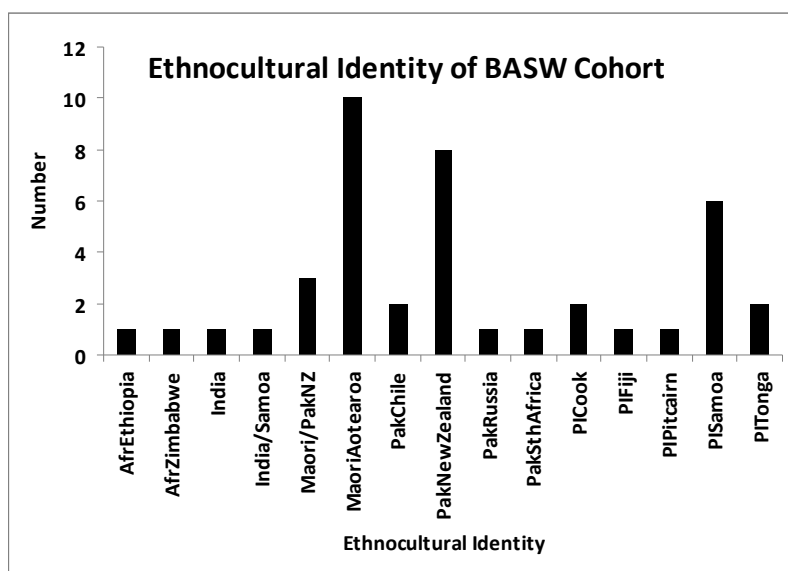


Figure 1. Ethnocultural identity of BASW cohort.

One does not want to personalise these notions because it is more about the system than the student. It is as a result of their interactions with this system, or process for learning – one in which many have had limited or unsatisfactory experiences – that students can relate to what Brookfield (2000, p. 4) is saying. As a result, these experiences described by the students during focus groups, will be framed using Māori concepts expressed through proverbs or phrases. This use of proverbs or phrases accommodates the worldviews of the students in the cohort. First, "impostorship" for us is better described by the following proverb, *E nohotia ana a waho, kei roto he aha*. This literally means *that one cannot tell from the outside what is contained within*. As tauira, our experiences of this notion were that at times we felt that we had no place in this system/process of learning. We had left school very early because two of us had babies, and the schools had no place for us, also, in this team, two of us had a parent die. Others in our cohort were suspended from school, dropped out, or were forced out to work as soon as possible because they were female and therefore education was not a priority. As a result, we lacked

experiences, as insiders, of any formal learning process and the institute we were now in. We lacked congruence. The first course booklets we were given reinforced this feeling of "What am I doing here?" They described assessment requirements such as a "semi-structured task", a "PowerPoint presentation", "reflective journals", "essays", "triads"! At times, we wondered about our arrogance/presumption that we could fit in here. Everyone questioned our reasons for wanting to go back to 'school' to put ourselves through the stress caused by tutors, changes to the timetable, staffing or assessments! For what, they asked? To be a social worker! Many of those who made such comments were long-time recipients of paternalistic, or charitable, social work interventions.

The traumatic feeling described by Brookfield (2000, p. 4) as, "cultural suicide" can be assessed by the statement, *Whanau tu mokemoke*. This suggests the feeling of *being isolated from your root cultural supports* – supports that had surrounded us before we committed to the learning processes involved in the BASW programme. This process of learning separated us from those support networks that were part of our previous world. Some of our mates or family members would ask us if we now thought we were "better" than them. They tried hard to get us to skip class to do other things. They could not understand why we had gone back to class at our age! What was worse, was that no-one else in our families had experience of education at places like MIT. For example, when you talked about your day you found some of your networks tuning out because they could not understand the experiences you were describing and the vocabulary you were using. However, in spite of their questions, and some people's apparent lack of interest, they are supportive (in a bewildered way).

The third thematic terrain from the student responses, *Turuturu a tai. Tururu a uta* is what we call Brookfield's (2000, p. 4) "incremental fluctuation". This phrase is metaphorically, the feeling of the *surging of the tide*. We have times when we feel that we are moving forward and, at other times, we think we are going backwards. Although everybody feels this sometimes, it seemed that it happened to me more often than it should have. It occurred, for me, as I had to meet new academic writing and technological challenges and as I learnt to 'tame my computer.' I lost so much work!

Fourth, there is the 'changing world' or *Te ao hurihuri* which we use as the substitute descriptor for "lost innocence", (Brookfield, 2000, p. 4). Our greatest shock since entering this system/process is that we are expected to question/interrogate our beliefs and values. Until we came here, these were the 'truths' that our lives were based on. Things like:

That only people who finish high school deserve/can come to MIT.

That because I'm Samoan I shouldn't be here because Samoans aren't smart enough!

The belief that with education, I can make a difference!

That pākehā have no time for me.

That all people are equal in Aotearoa New Zealand but that doesn't include me!

Having to reflect on these long-held beliefs can lead to a real loss of part of our

identity and more isolation, because those at home still have the beliefs and values we had when we began here. We are between two worlds and to study we have to live by compromising parts of both worlds

Finally, the fifth notion, the importance of 'community.' For Māori, community means people – *he tangata, he tangata, he tangata*. Our reason for becoming social workers is not about us. It is about the community around us, particularly the desire to do better for our families. That is our motivation.

So, according to our colleague Cath Dickey, we had described things that could be characterised through the work of Stephen Brookfield. We were also told that we discussed components of Mezirow's (2003) "transformative theory of adult learning", without knowing that was what we were talking about. We also accurately described Bron's (2005) notion of 'floating', Alheit's (1995) "biographical learning", and the need for what Tinto (2001) called 'educational communities' in which to create a context for success. We can truthfully say, of all of these, we had only heard of 'educational/learning communities' because they are similar to our 'cohorts'. However, we now see ourselves in the readings and books for our courses. For example, in the course, *Te Ira Tangata: Human Growth and Development*, we found that our developmental stages are the same or similar to others, regardless of our ethno-cultural background. Realisations like this are so empowering when you have risen from society's rubbish tip.

The focus groups provided the teaching team with information to plan support for us. All this information was synthesised and used to provide us with a degree programme, which valued our prior life experiences as a base from which to grow, had 'academic foundation education', embedded, or provided concurrently, in each of the papers, and, administratively, allowed for the cohort to stay together or, at times, to work in ethnically-based caucus groups using our own languages (after May, 2002), or gender-based groups, thus allowing us to develop as individuals within an educational community.

Initially, the caucus group idea was fraught with questions for those of us who did not fit into either the tangata whenua or Pasifika groups. We were such a mixed bunch; born and bred Kiwis and recent migrants. We were 'the others' – later dubbed 'The Ark'. We hated it because there was no place for people to go who were comfortable in two worlds, Māori and non-Māori. We were stuck with foreigners. There was no connection to Aotearoa New Zealand for our group. On the other hand, the tangata whenua group was seen positively by its members because it enabled them to make connections with each other and to work in a tuakana-teina relationship to address challenges and make the most of opportunities. Similarly, the Pasifika group worked well, in spite of there being a 'division' caused by the difference in values between those born in Aotearoa New Zealand and those born in the Pacific Islands. As a group, 'The Ark' made their feelings clear and this has resulted in a change in the structure of groups for the new intake.

We now know that we are described as 'non-traditional' students. Many of us come from depressed socio-economic geographical areas, are older than the school-leaver tertiary student, have had unsatisfactory or short experiences of secondary schooling, and, in general, come from backgrounds that do not consider tertiary education as an option to pursue. Over time, hegemonic discourse has convinced us, and our families, that we do not have the intellect or attributes required, nor do we

need a tertiary education. For many of us, unequal power relationships in education (Bishop, Berryman, Richardson, & Tiakiwai, 2003) have been our lived reality and this has prevented us from, as Mason Durie suggested in 2001, participating in the "global community" (p. 5).

Things are changing for us. Our past educational experiences had tainted the desire for education. Some of us had never seen someone who was ethnically like us as a teacher in our classrooms. The BASW degree has put educators in front of us with whom we can identify. We can see that, although they look like us, they have made it in this environment. Their being our tutors is very reassuring and demonstrates there is a chance we can be successful. Some of us came because our children were old enough so we could come back to get the education that had been missed. Some came to get off the dole, or because Work and Income encouraged them to, and some came just because they had grown up and now recognised the value of education as a pathway to get a good job.

We all quickly recognised that the BASW teaching team were determined to help us be successful. After all, they had chosen us on the grounds that they saw we had some attributes that could make us good social workers! We had done some writing at our interviews, not to exclude they told us, but to make sure they knew what academic help we would need. We met our academic mentor very early in our first year. Before we had to do an assignment in our courses, we had learnt (or revised) what was needed – anything from essays, to PowerPoints, to journals, to using specialised software, and all taught based on our life experiences. I am still not sure of the connection between the number of books, edited books, journals, electronic sources, conference presentations invented about 'fishing' that we used, to practice APA referencing! On top of all that support, we could get formative feedback in person or by using email. The day I got my first 'A'...

I cried and became angry at the same time. I thought the lecturers were 'bullshitting' me. For twenty years I believed I was a dumb Māori.

I didn't stop smiling for days. I carried it around in my handbag and showed anyone who would look! It became rather tatty!

I put it on the top of my desk, on the table where I could see it to keep motivating me. I felt it validated my position in the degree.

I'm still carrying it around. I take it out, look at it and smile. It motivates me to carry on.

We were confident that when we needed an academic skill the teaching/revision would be in place. We liked being able to learn skills as we needed them, without having to add time to our course. We want to get out to work in the "global community" that Durie (2001, p. 5) was talking about as soon as possible.

Durie (2001, p. 5) was referring to Māori, not being able to participate in "the global community" but there is a need, along with Māori, to empower urgently all marginalised students so that we can gain qualifications, that will assist our crossing the borders that currently restrict our ability to become true "citizens of the world" (Ministry of Education, 2002).

MIT has over 161, self-identified ethnic groups. Each of us had huge mental,

social and emotional borders to cross before we could even enter the gates of this institution. Some of these 'borders' include a fear of more failure in an education system/process, a lack of understanding about how these large institutes operate, the 'tall poppy syndrome', the stereotypical views that are prevalent about different ethno-cultural groups of people, welfare dependency, expectations by society that there is age-appropriate education, and the remnants of colonisation. We have even more challenges to stay here and complete a qualification because for us tertiary education is not the norm. We have learnt that you can negotiate a 'rough sea' through perseverance as the whakatauki, *He moana pukepuke e kengia e te waka* suggests.

Some statistics/tatauranga

We have not been successful in our schooling until now. Take a look at our results. (The following charts are a selection from the data gathered between 2006 and 2008.)

At the end of the first year, four of us failed to complete. Of the four, three had reasons beyond their control that led to their withdrawal.

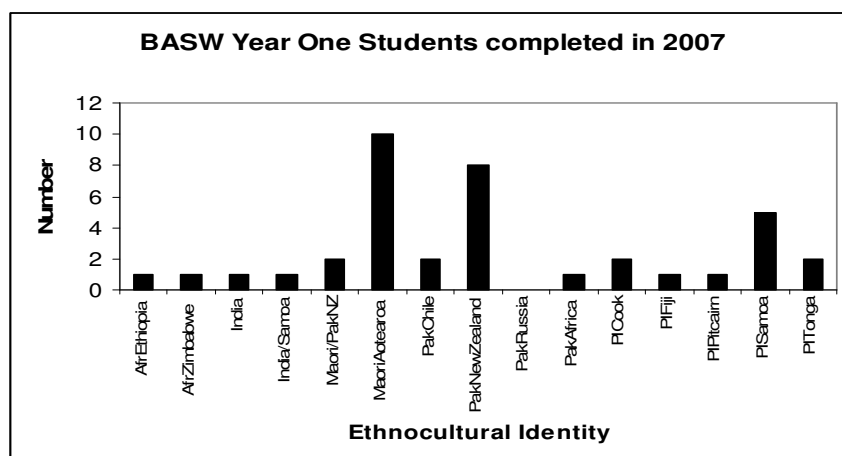


Figure 2. Bachelor of Applied Social Work students who completed in 2007.

Those students who finished the year, that is 39 (out of 43) passed every course.

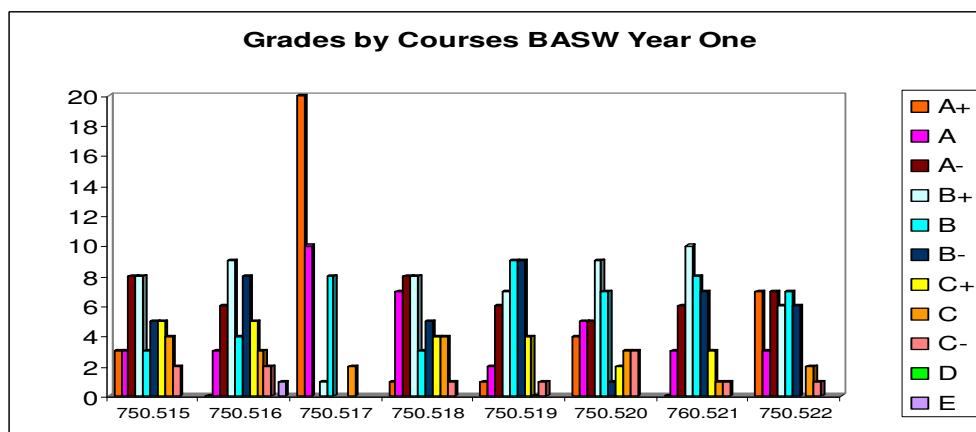


Figure 3. Bachelor of Applied Social Work Students' Grades in 2007.

Arotake e tauira

Evaluation by students. At the end of 2007, we were asked to evaluate the academic support given during our learning experience in 2007.

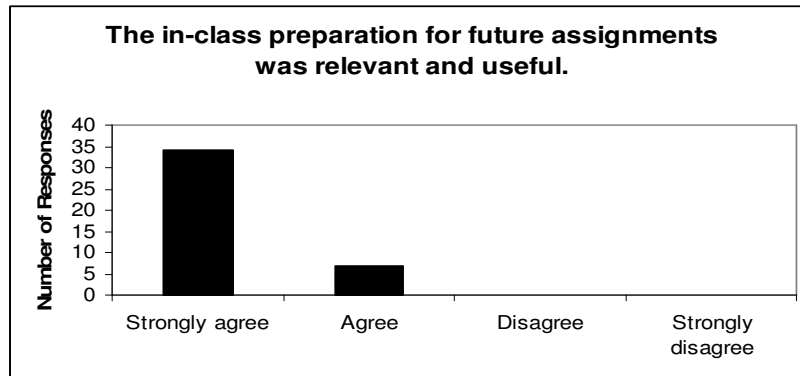


Figure 4. Response to question about in-class preparation of assignments.

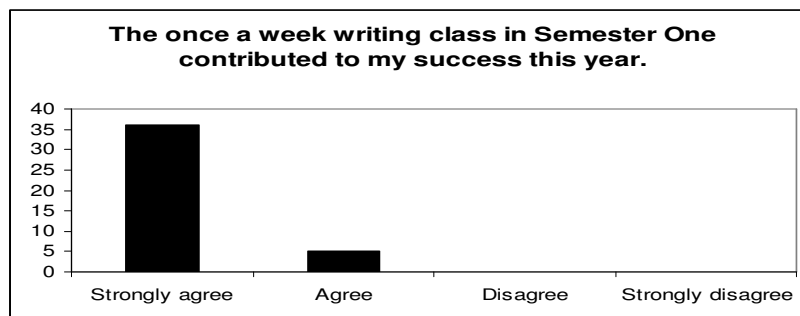


Figure 5. Response to question about weekly support class.

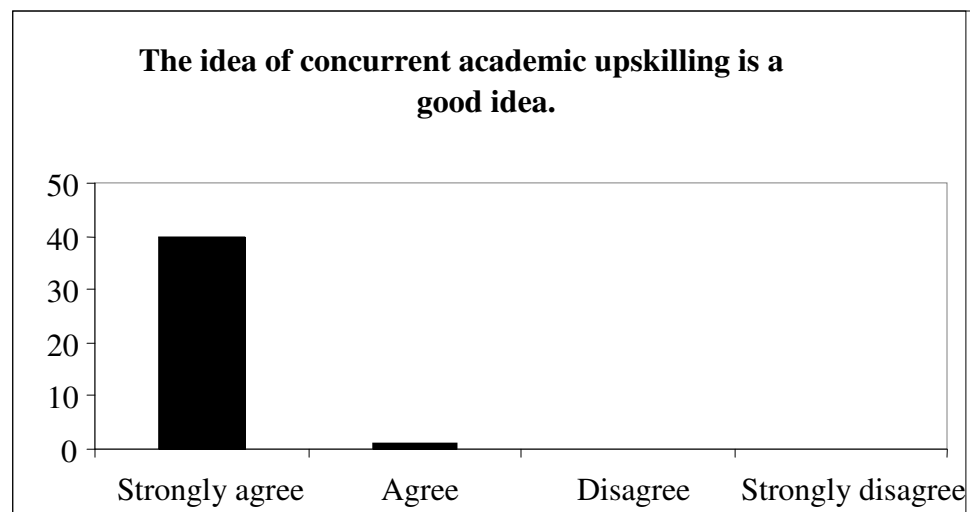


Figure 6. Response to question about concurrent academic upskilling.

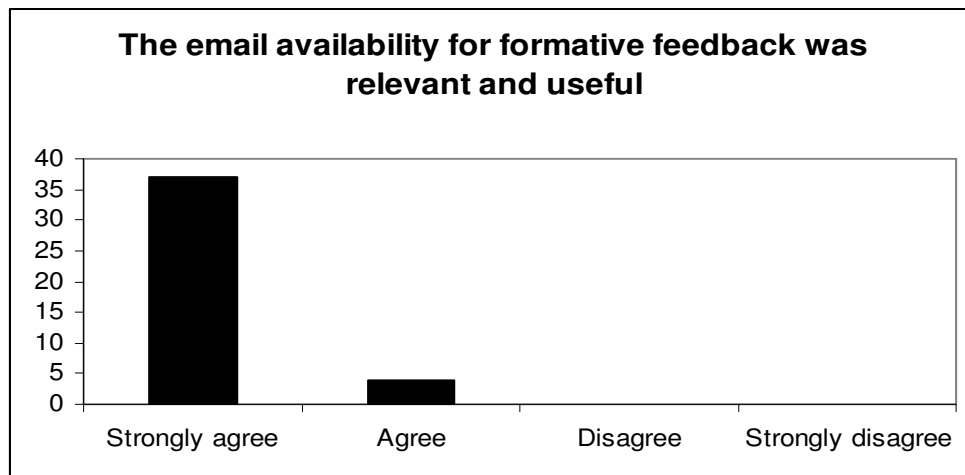


Figure 7. Response to availability of formative feedback by email.

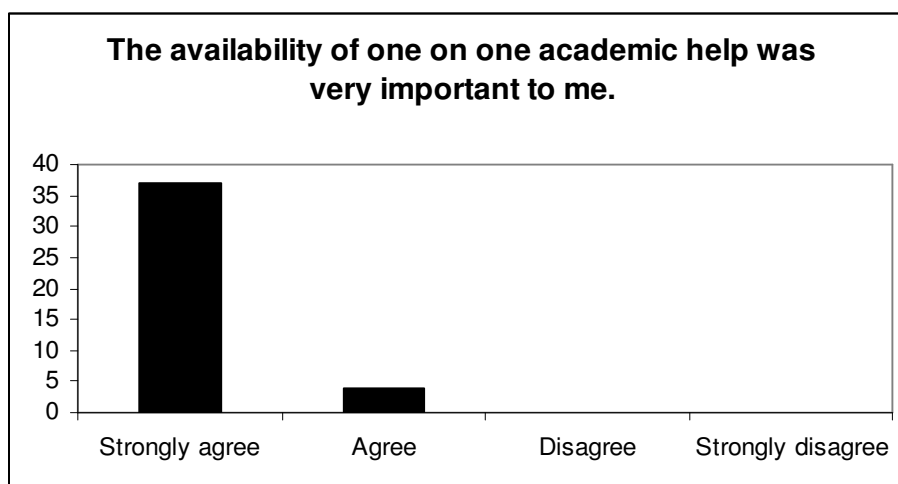


Figure 8. Response to question about one on one academic help.

Rubrics

Most of us liked rubrics because they helped us know how to get great marks in assignments. They also provided us with grounds on which to challenge our lecturers if we didn't agree with their marking. We liked this accountability!

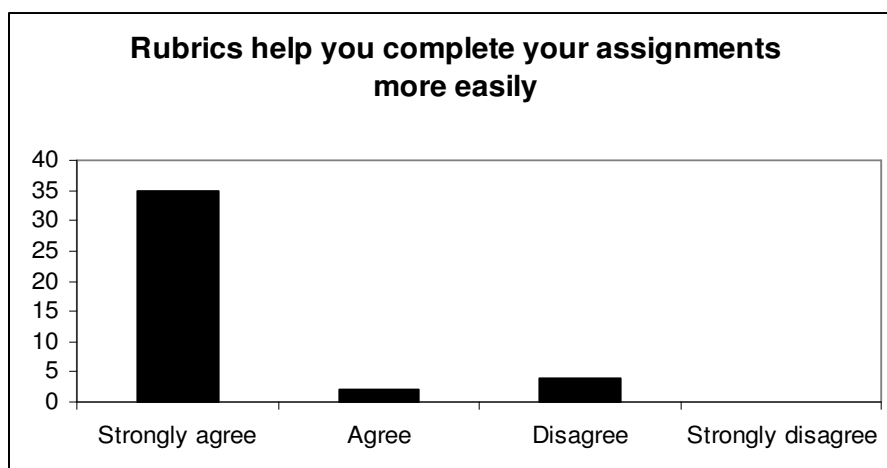


Figure 9. Response to question about rubrics.

Whakamutunga/Conclusion

Is the approach working? Already the retention and success rates for the BASW have exceeded MIT's expectations. It is popular with the tauira because they are able to complete a bachelor's degree in three years. No time is added on to get the required academic skills. This happens because tauira 'trust' that their life experiences are valued and that their kaiako have, at the appropriate time, provided educational experiences that enable the necessary skills to be learnt or practised before they are needed. In terms of the government of Aotearoa New Zealand and the Tertiary Education Commission's (2002) strategy requirements for the New Zealand knowledge society, this programme is innovative; it is reversing the negative educational experiences of 'non traditional' and marginalised students.

*Before I was in a 'black hole' now there is light. I know there will be a dawn.
Getting a degree is such a buzz!*

We are being successful. Most importantly, we want to be in class; our families are beginning to see that tertiary education is a positive and achievable option for our whānau (family). However, we still hear from those around us:

*You're crazy!
You're still crazy but you are 'sticking' at it!
BUT,
Now we're looking forward to the 'capping'!*

Ki Hea?/Where to?

We want to tell our stories in a collaborative relationship, so we can analyse these experiences to clearly identify what support was needed for our success and what else would be useful and relevant. We want to make sense of our educational experiences, interactions, and relationships, using our ways of theorising and explaining.

We want learning institutions to select us for courses based on those attributes we have that are likely to make us successful in our chosen vocation, rather than use our traditionally viewed educational deficits as a barrier.

We want to encourage others to view bridging education differently, with respect afforded to student motivation and life experiences, rather than the need for traditional academic qualifications for entry into degree programmes.

Mā pango, mā whero, ka oti mahi.
(By black and by red the work is done)
No reira tena koutou katoa.

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Cycles of Curriculum Change: Bridging Educators as Curriculum Developers

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This paper looks at the way subject curricula evolve in Bridging Education. Using a sociocultural perspective, especially that of Etienne Wenger (1998), which uses the terms reification and participation, a model is developed that depicts the evolution of individual subject curricula as cycles, whereby the review after every completion of the course impacts on further change in the subject curriculum.

The basis for this model comes from a model of curriculum change developed in a thesis by Teresa Fernandez (2007) and presented in a paper in the *Journal of Curriculum Studies* (Fernandez, Ritchie & Barker, 2008). The curriculum change model, based on extensive data collected from participants in the change, showed processes of reification where ideas and lived experiences were made concrete (Wenger, 1998), such as in the production of a curriculum document, and processes of dereification where artefacts were put into fluid action or practice, such as when teachers make sense of a curriculum document. The terms reification and dereification were found to be useful in identifying processes in the cycle of curriculum evolution. The development of this model of curriculum change for bridging education has identified an area where it is not very clear what happens as a teacher tries to set up or refine their subject curriculum. The grey area, with respect to the processes in the cycle of change as the bridging educator sets out to update, improve or even rewrite the curriculum for their subject, is not as evident as the particular curriculum change studied in the research by Teresa Fernandez (2007).

Thus, drawing up a model for curriculum change in the area of bridging education has highlighted an area that needs further research. One fundamental difference between the curriculum change that occurs in the school subjects in New Zealand schools and the kind of curriculum change that occurs in bridging education is that most bridging educators' courses are not mandated or even moderated for standards. The bridging educator is the key person in charge of designing and delivering the subject in their institution and, as there are no public exams etc., the standards can be rather arbitrary. However, the bridging educator does work within certain constraints that greatly impact on the level and standards of the subject taught. The above ideas, the model and the implications of such an analysis are explored in this paper.

Introduction

The focus of this paper is to analyse the evolution of subject curricula in the field of Bridging Education. I would like to take the definition of Bridging Education from the description in this conference announcement, Bridging Education is seen as "providing educational opportunities for students who lack the traditional entry qualification for tertiary study" (New Zealand Association of Bridging Educators, 8th Annual Conference Announcement, 2008). The providers for such education are Universities, Polytechnics, Wananga, Colleges of Education, Private Providers and Secondary Schools. The papers that are provided to staircase the students to tertiary study depend on the cohort of students the institution is dealing with. For instance, at my institution, a university, the pathways to tertiary education are designed for targeted student cohorts such as international students, domestic students who did not achieve sufficient NCEA credits, Maori students who did not achieve university entrance, and mature students wanting to pursue a degree. The programmes are different and the combination of papers, to complete the programmes resulting in a Certificate, are different. Thus the language needs of international students, the

subject content and study skills needs of previously unsuccessful domestic students and refresher courses for mature students, are dealt with within the papers offered.

How these papers are designed, and the evolution of these papers over time, are the subject of this paper. The issues involved and the influences impacting on the curriculum offered in these papers are explored. The idea for this paper originated from research I conducted on the physics curriculum at secondary schools (Fernandez, 2007). The research, based on viewing the scenario of curriculum change and teacher change from a sociocultural perspective derived from Etienne Wenger's ideas (Wenger, 1998), resulted in a model (Fernandez, Ritchie & Barker, 2008) to explain the processes involved in such a change. The outline of this model and the processes involved are used to analyse the situation of curriculum change in the area of Bridging Education, with a focus on the evolution of papers within the Bridging Education programmes. I shall start by discussing ideas about curriculum and change. Then introduce ideas about sociocultural theory and explore greater depth into Wenger's ideas about reification, participation and community of practice. Finally, I will use the ideas discussed in the previous two sections to analyse the situation of curriculum and change within Bridging Education, and then develop a tentative model to explore the cyclical nature of these changes.

Curriculum and Curriculum Theory

In this section, the various conceptualisations of curriculum are explored. It is difficult to get a consensus on the 'definition' of curriculum as each curriculum theorist gives a definition based on their particular philosophical stance. These stances lie somewhere along a continuum from curriculum being considered a prescription of contents to a holistic view that includes the socio-political influences on schooling.

Schubert (1986), in describing the extent of this continuum, evades the whole issue of definition by claiming that to define curriculum would be to restrict the richness of understanding of this complex field. He prefers to describe curriculum in terms of its major conceptions: curriculum as content or subject matter, curriculum as discrete tasks and concepts, curriculum as a programme of planned activities, curriculum as intended learning outcomes, curriculum as cultural reproduction, curriculum as experience, curriculum as an agenda for social reconstruction, and curriculum as "currere" (a Latin word meaning 'the course to be run'):

It also becomes a social process whereby individuals come to greater understanding of themselves, others, and the world through mutual reconceptualisation. ... The curriculum is the interpretation of lived experiences. (Schubert, 1986, p. 33)

This mutual reconceptualisation not only refers to interactions between people in immediate proximity, but includes learning interactions through books, other literary and artistic expression, and other means. Any particular curriculum will encompass some aspects of all these major conceptions put forth by Schubert.

Another definition of curriculum is given by Stenhouse (1975) who describes it as a link between educational principles and educational practice:

A curriculum is an attempt to communicate the essential principles of an educational proposal in such a form that it is open to critical scrutiny and capable of effective translation into practice. (Stenhouse, 1975, p. 5)

This view is, however, repudiated by Kemmis and Fitzclarence (1986) who note that theory and practice cannot be separated out as distinctive domains as they mutually affect each other and together constitute the meaning of education. They point out that curriculum theory needs to address two important problematic issues: the relationship of theory and practice, and the relationship of education and society. They suggest that the role of society in education cannot be underestimated. The different views and values in society will be fiercely contested by the stakeholders as a curriculum change is initiated:

... the choice of what aspects of the life and work of a society should be represented in the curricula of its schools and other educational institutions remains crucial, not only to educationists but to society as a whole. (Kemmis & Fitzclarence, 1986, p. 23)

The historical perspective on curriculum change as described by Goodson (1988) aligns with the views of Kemmis and Fitzclarence (1986) when he concludes that curriculum should be viewed as a social and historical construction, and should be studied with the sensitivity that such an understanding requires.

Morrison (2004) argues that it is limiting to look for a singular theory of curriculum. He advocates multiple theories that delimit the curriculum. He says that there is no such thing as a value-free curriculum theory as he views curriculum as a site of social engineering. Certain interests are protected, acknowledged and advanced by selecting what goes into a curriculum from culture, knowledge and society. However he wants to throw off the yoke of control of any particular curriculum theory and set curriculum free:

Curriculum theory should be a theory of plenitude, of excitement, of abundance, of the creation and discovery of new ideas. ... the curriculum is what we learn, what we do, what we think, what we value, what we are, who we are, and who we want to be, both as persons and as communities. (Morrison, 2004, p. 492)

Another conception of curriculum that is useful to consider here is the technocratic versus the critical curriculum by McGee (1997). By technocratic, he means the curriculum as defined by physical entities such as curriculum documents, which usually include syllabuses, teachers' handbooks, other resource and teaching materials, and assessment materials. Here, the curriculum is seen as a plan for teaching and decontextualised from policy making and even the contexts of its implementation. The danger, as described by McGee, is that such a view regards curriculum to be neutral and beneficial to all; the prime goal being the learning of an "uncontested body of knowledge" (p. 46). McGee advocates another way of viewing the curriculum: the critical perspective. Here the curriculum is more than a set of plans for teaching; it includes both practice and plans. The context of building the

curriculum, in terms of the planning and implementation features that affect the curriculum, needs to be open to teachers and students so that they may be able to deal with the curriculum more reflectively. Thus, a critical curriculum is seen as more open-ended and less prescriptive than a technocratic curriculum. The two conceptions advanced by McGee can be compared to the two ends of the continuum of conceptions of curriculum described earlier in this section, which range from curriculum being a prescription of contents to curriculum being a more holistic view of education, including the socio-political influences on schooling.

In this analysis, curriculum is viewed as encompassing the political, philosophical, psychological and subject discipline agendas, as well as involving the social contexts of teachers and their students. Thus, the curriculum document, if there is one, contains injunctions about purposes, pedagogy and content for teachers to use in classrooms. There are underpinning social, political and cultural ramifications. Curriculum development in this analysis is seen not to be a simple linear process as advanced by Tyler (1949) but one that is engulfed with underlying complexities.

An understanding of what 'curriculum' is and its many facets as shown in this section can lead to a better appreciation of curriculum change. Curriculum as a social, cultural and historically based entity cannot be static because its bases are not static. This leads inevitably to curriculum change which is explored further in the next section.

Curriculum Change

The curricula offered by bridging education institutions are in a state of constant change as they are tied closely to the needs of society and the wider overseas market. As society is in a continuous flux of change, it is inevitable that the curriculum will have to change from time to time to keep up with societal changes. In New Zealand there seems to be a curriculum change for schools recorded roughly every ten years.

The process of curriculum change can take many paths and this has been illustrated by the different models that have been employed in New Zealand; for example, the centrist model (a top-down model with research and drafting of documents before official implementation); centre to periphery model (change carried out by a committee made up of representatives of interest groups in the subject area); research, development and dissemination model; and action research (Bell, 1990; McKinley & Waiti, 1995). One characteristic that distinguishes the different models is the level of negotiation of the curriculum change, with the centrist model having the least amount of negotiation and the teachers and the action research model having the most. This brings into account the question of ownership of the curricula by teachers.

Examples of more cooperative models of curriculum change, where there is greater negotiation with teachers, are described in Baird, Mitchell & Northfield (1987), Elmore (1995), Pedretti and Hodson (1995), and in Prawat (1996). These can be contrasted with the top-down model of curriculum development employed in the 1990s curriculum changes in New Zealand.

Often a top-down curriculum change is initiated in two stages: writing of curriculum documents by experts, loosely termed curriculum development, and

curriculum implementation by teachers, which involves putting the curriculum developed into action in the classrooms. Schubert (1986) extends the role of curriculum developer from merely developing curriculum documents to encompass the work of teachers as he considers them as having a key role in developing curriculum, in their planning of programmes that influence the knowledge, skills, attitudes and values of their students. He contends that their effectiveness in this role can be enhanced by informing them of research and theory that support the curriculum development process.

This analysis will explore curriculum and change factors and influences that impinge on the curriculum developed for bridging education. It will compare and contrast the similarities and differences in curriculum change for secondary schools and for bridging education. One important factor in this situation of curriculum change is the teacher. Without the teachers changing their practice, there can be no real change in the curricula. The role of the teacher in bridging education is further analysed, given that there may be some very crucial differences to that of the role of teachers at secondary schools.

Teacher Change

Curriculum change implies teacher change. The critical role of teachers in any curriculum change process is acknowledged by many writers on school curriculum (e.g., Bates, 1991; Bell & Gilbert, 1996; Butler & Beasley, 1988; Claxton & Carr, 1991; Davis, 2002; Elmore, 1995; Fullan, 1987; Schubert, 1986; Shulman & Sherin, 2004; Waugh & Punch, 1987): Educational change depends on what teachers do and think – it is as simple and as complex as that (Fullan, 2001, p. 115).

The high expenditure of time and resources involved in developing a glossy curriculum package can be wasted if teachers are not empowered to effectively implement the new curriculum in their classrooms (Fernandez & Ritchie, 2003). Teacher development leading to teacher change is therefore seen as crucial in facilitating the implementation of a new curriculum. Literature on teacher development covers the various strategies for effective teacher development and also highlights the various pitfalls along the way (e.g., Bell, 1993; Bell & Gilbert, 1996; Briscoe, 1991; Burden, 1990; Claxton & Carr, 1991; Davis, 2002; Fensham & Corrigan, 1994; Fullan & Hargreaves, 1992; Hargreaves & Fullan, 1992; Waring, 1979; Zeichner & Tabachnick, 1991).

The finding of a study conducted by Elmore (1995) showed that the teachers who were successful in implementing a change were those who were actively involved in the formulation of the school-based changes and not merely involved in carrying out the planned restructuring. Thus, different forms of teacher development enable teachers to be engaged in curriculum change to a greater or lesser extent; from being mere implementers of an already designed curriculum package to being curriculum developers themselves (see Schubert, 1986). Traditionally, New Zealand teachers have fulfilled a variety of roles in curriculum development from being curriculum change initiators or writers, conductors of teacher development, to being implementers of curriculum change.

Stenhouse (1975) expands the concept of professionalism of the teacher to include curriculum decision making and being involved in the role of 'teacher as researcher'. An important consequence of this is the sense of control and ownership

that the teacher feels he or she has over the new curriculum (see Baird, Mitchell & Northfield, 1987). This sense of empowerment is viewed by researchers as critical for effective curriculum change (Bell & Gilbert, 1996; Pedretti & Hodson, 1995). My analysis will explore how teachers in bridging education may have control over the new papers and curricula developed within their institutions.

There are other issues involved in teacher change. Implicit theories held by teachers about the nature of knowledge, of teaching and learning, greatly affect the way they teach in their classrooms (e.g. Claxton & Carr, 1991; Prawat, 1996). Because of this, the first step to bringing about any change in the classroom is for teachers to reflect on their current classroom practice and beliefs about teaching and learning (Johnson, 1992). Shulman and Shulman (2004, p. 257) attest to the variability in teachers undergoing change:

... we were reminded constantly of how enormously different from one another were the teachers with whom we worked, and especially how much they varied in the ease or difficulty with which these novel ideas were accepted and applied in their work.

Another factor that was found to be important in a number of research studies cited in Prawat (1996) is the importance of collaboration among teachers when undergoing change. They conclude, from in-depth case studies of schools undergoing restructuring, that the presence of an on-site colleague who can serve as a resource and sounding board is an important factor in individual teacher's success in changing practice.

Thus, literature reported here highlights the importance of teacher development to enable teacher change when trying to bring about a change in curriculum. The involvement in, and ownership of, the curriculum change by the teachers, the role of their beliefs and existing practices, and the presence of on-site supports have also been highlighted.

The two main players in the classroom, where the curriculum is usually enacted, are the teacher and the students. The interactions between these two main players are based on teaching programmes, timetables, assessments, etc. These are at the core of the translation of any innovation or curriculum change into the classroom and are the key to the success or otherwise of the intended change. There are other factors that come into play in these interactions, which are not so obvious, such as, personality, beliefs, background, experience and expertise. These are brought into the interactions by both teachers and students.

According to Fullan (1991), the implementation of an educational change will require changes in actual practice along three dimensions: the use of new or revised materials, the use of new teaching approaches, and the alteration of beliefs. The first dimension, involving the use of new materials, is usually the most visible change; the third dimension, which involves the change to deeply held beliefs, is the more difficult one to deal with. The following section will deal with the theoretical perspective used to analyse the area of curriculum change in bridging education.

Sociocultural Perspectives

Sociocultural theories of learning are useful when viewing the wide field of curriculum change. The interactions of the individual, their social surroundings and community, and the artefacts that promote or inhibit the change are key aspects of this theory. For any curriculum change to occur, there has to be teacher change, and inherent in this is that learning occurs. The basic premise of sociocultural theories is that learning occurs in a social setting and is mediated by cultural objects (Cole & Engestrom, 1993; Lave, 1991; Lave & Wenger, 1991; Rogoff, 1995; Wertsch, 1991).

Essentially, a sociocultural approach to teaching and learning has the following characteristics:

- It views knowledge acquisition as a collaborative and socialising practice.
- It conceives humans as operating in communities of practice.
- It centralises the role of artefacts or cultural objects in mediating action within a social setting (includes cultural, institutional and historical settings).

The fundamental themes in sociocultural approach, deriving from the writings of Vygotsky and his followers, include ideas about human action and mediated learning:

The goal of a sociocultural approach is to explicate the relationships between human action, on the one hand, and the cultural, institutional, and historical situations in which this action occurs, on the other. (Wertsch, Del Rio & Alvarez, 1995, p. 11)

However, sociocultural theorists view humans as not having direct access to the empirical world. They require the use of artefacts or cultural tools to interact with the world in obtaining information about it as well as acting on it. Artefacts are seen to “provide the link or bridge between the concrete actions carried out by individuals and groups, on the one hand, and cultural, institutional, and historical settings, on the other” (Wertsch et al., 1995, p. 21).

Lantolf (2000) describes cultural tools as being either symbolic (psychological), such as language, or physical, such as a document. Both are artefacts, created by human cultures over time, which can be handed down to succeeding generations. Each generation can modify the artefacts to meet the needs of its communities and individuals before passing them on. Thus, a curriculum document can be revised, rewritten and be in a state of dynamic change in order to keep up with the changing needs of society.

Wertsch et al. (1995) suggest that, when new cultural tools are brought in, they are seen to overcome the limitations of earlier mediated perspectives. However, they suggest that each new cultural tool also introduces its own new limitations. They caution that:

...while the cultural tools or artefacts involved in mediation certainly play an essential role in *shaping* action, they do not *determine* or *cause* action in some kind of static, mechanistic way. Indeed, in and of themselves, such cultural tools are powerless to do anything. They can have their impact only when individuals use them. (p. 22)

The cultural tools only possess the potential to shape action, their unique usage is up to the individuals using them. This is akin to the contention of Wenger (1998) that practice (or human action) is not a result of the design, or artefact, but a response to it. This discussion can be used to look at the availability of innovative ideas or resources and how they are actually used in bridging education.

Several researchers have suggested ways in which sociocultural frameworks can incorporate ideas about change (e.g., McNaughton; 2002Rogoff, 1995). However, this analysis will focus on the framework of Wenger (1998) to review the situation of curriculum change within bridging education as it was found effective in studying the processes of curriculum change studied in the research by Fernandez (2007). Bridging education teachers form a community of practice; this idea and other ideas in Wenger's theory are described in more detail in the following section.

Wenger's Sociocultural Theory of Learning: Participation and Reification within a Community of Practice

The concept of a community of practice was first set out by Lave and Wenger (1991) and was further developed by Wenger (1998). Lave and Wenger state:

A community of practice is a set of relations among persons, activity, and world, over time and in relation with other tangential and overlapping communities of practice. A community of practice is an intrinsic condition for the existence of knowledge, not least because it provides the interpretive support necessary for making sense of its heritage. (p. 98)

Wenger (1998) introduced two pivotal concepts: 'participation' and 'reification'. He defines participation as "the social experience of living in the world in terms of membership in social communities and active involvement in social enterprise" (p. 55). It is both personal and social; a complex process that incorporates doing, talking, thinking, feeling and belonging as it involves the whole person. Participation is seen by Wenger as a source of a person's identity.

Reification, on the other hand, is the objectification of practice that occurs within a community and can be linked to the creation of artefacts as described in other sociocultural theories. It is:

... the process of giving form to our experience by producing objects that congeal this experience to "thingness". In doing so we create points of focus around which the negotiation of meaning becomes organized. (Wenger, 1998, p. 58)

Any community of practice produces abstractions, tools, symbols, stories, terms, and concepts that reify something of that practice in a congealed form. ... aspects of human experience and practice are congealed into fixed forms and given the status of object. (Wenger, p. 59)

The members of a community interact utilising cultural artefacts, including objects, descriptions, signs or symbols, and in doing so derive their own socially mediated personal meanings. In a community of practice, members will engage in

processes such as arguing their points of view, translating what is objectified into action, and using a procedure or tool in their practice.

The two pivotal concepts of participation and reification are very apparent in the curriculum change situation that is being analysed here. The various players in the curriculum change undergo these processes. Wenger goes to great lengths to explain the duality of participation and reification:

Participation and reification both require and enable each other. On the one hand it takes participation to produce, interpret, and use reification; so there is no reification without participation. On the other hand, our participation requires interaction and thus generates short-cuts to coordinated meanings that reflect our enterprises and our takes on the world; so there is no participation without reification. (Wenger, 1998, p. 66)

Thus Wenger sees reification as both dependent on and facilitative of communication between participants:

... reification always rests on participation ... (it) assumes a history of participation as a context for its interpretation. In turn, participation always organises itself around reification because it always involves artefacts, words, and concepts that allow it to proceed. To be understood meaningfully as a representation of a piece of physics knowledge, an abstract reification like $E=mc^2$ does not obviate a close connection to the physics community but, on the contrary, requires it. (Wenger, 1998, p. 67)

The interaction of the two aspects, reification and participation, is seen as a process for the “negotiation of meaning” which is described by Wenger (1998, p. 53) as an “active process for producing meaning, dynamic and historical”. It incorporates many factors and perspectives and can give rise to new connections of these factors and perspectives. “Negotiated meaning is at once both historical and dynamic, contextual and unique. ... negotiating meaning entails both interpretation and action” (Wenger, p. 54). This concept of negotiation of meaning is seen at play in the model developed (see Figure 2) when teachers interpret the social, cultural and historical aspects of bridging education and act by incorporating these meanings into their subjects taught. Negotiation of meaning is also a useful concept to describe when teachers have to contend with innovation or new ideas, as these are forms of curriculum artefact, interpreting them and acting upon their interpretations when making decisions about their implementation.

The duality of participation and reification, though of value to look at processes within communities of practice in general, has limitations in terms of explaining the curriculum change situation in the study by Fernandez (2007). In particular, it does not provide a particular theoretical term to describe the activity that was occurring after the process of reification. During this period of time, there are intense interactions that focused on the artefact that has been reified. Such interactions are forms of participation that have been described in a number of ways by Wenger, including re-appropriating, interpreting, re-negotiating meaning, realisation of a prescription or description. Participation, however, is also linked to the reification

process where the people within a community participate together in the process of reifying some aspect of their practice. In these terms, participation can be seen as being present at every point in the curriculum change process.

A new term *dereification* is introduced here to describe the participatory process occurring when members of a community of practice move from just following the surface rules associated with a reified form towards actually accommodating the reification into their practice cognitively, emotionally and socially (see Fernandez, Ritchie & Barker, 2008). For the teachers involved in this study, who were implementing a new curriculum, this was a stage of intense interaction, where a prior object of reification, the curriculum document, became meaningfully included in the teachers' practice.

The process of dereification advanced here can be considered as the reverse process to reification (in that an artefact becomes realised in practice, whereas reification is the result of practice being encoded in an artefact). Thus, for a teacher, dereification is a particular form of participation where there is intense interaction with the reified object, leading to a form of tacit, "non-articulated" practice that is compatible with the teacher's personal and professional identity as well as their social context. The definition of dereification that is being extended at this stage is that it *is a process where the reified object is incorporated within the plane of lived experiences and thus loses its purely objectified status*.

Lave and Wenger (1991) see participation in a community of practice as the key unit of analysis in a theory of social practice that includes learning. In this research analysis, participation is seen as being involved during dereification as well as during reification (see Figure 1). Participation and reification form a duality according to Wenger. In the model advanced here, participation and dereification are seen as also forming a duality; and reification and dereification are considered to be a dichotomy rather than a duality. Figure 1 illustrates the relations inherent in the structure of this model.

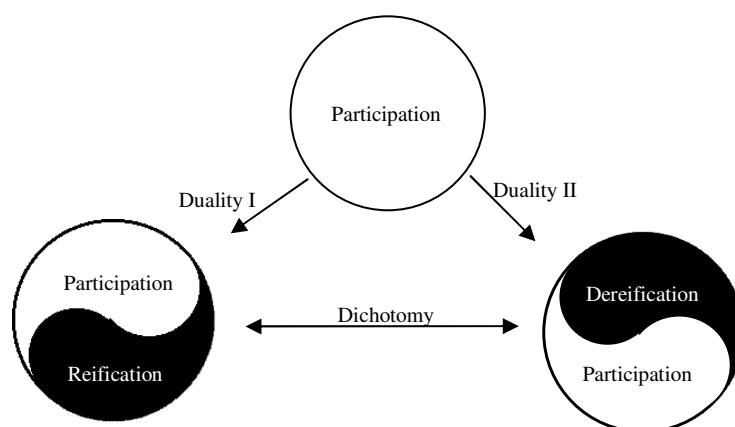


Figure 1. Reification and dereification subsumed within participation.

The theoretical framework comprising participation, reification and dereification has been useful in analysing the development and implementation of a new physics curriculum in the research carried out by Fernandez (2007). The dichotomy of the processes of reification and dereification was found to be

necessary in developing a model of curriculum change based on this theoretical framework. The curriculum change model developed by Fernandez is used as a basis for developing a possible model for curriculum change in bridging education.

The Analysis of Curriculum Change within Bridging Education

Curriculum changes in bridging education can occur in a number of ways, from small tinkering with the course outline due to feedback/evaluations from students, or major upheavals, such as new programmes and structures being put in place due to restructuring of an institution, or changes due to wider socio-political-economic changes in society impinging on the institution.

Using the model based on Wenger's ideas of reification, R, and participation, and extending that to a new concept of dereification, DR, (see Fernandez, Ritchie & Barker, 2008), a model is developed to understand the process of curriculum change in bridging education (see Figure 2).

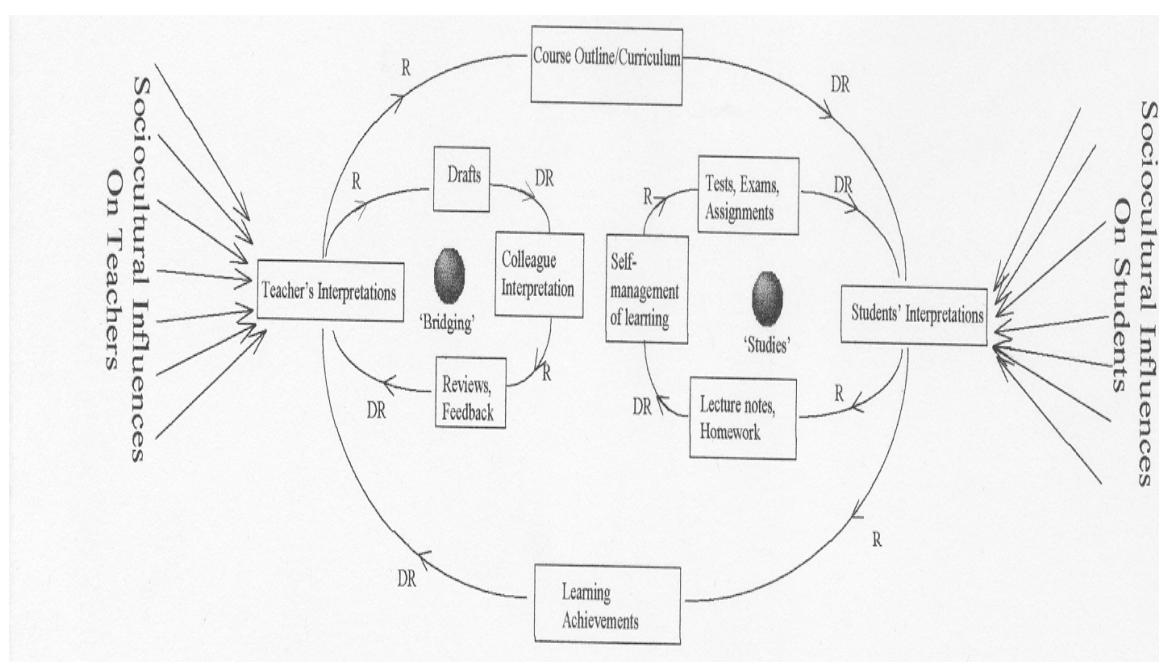


Figure 2: Cyclic processes of curriculum change in bridging education.

This model displays two sociocultural cores: 'bridging' and 'studies'. In the 'bridging' core, processes revolve around the values, artefacts and activities that incorporate the institutional drive to bridge the gap so that students who are locked out can access tertiary study. In the 'studies' core, processes that access the social institutionalised pathways to jobs, employment and to life's chances come into play. The processes around the sociocultural artefacts based on the concepts of 'bridging' and 'studies' undergo a cyclical path in the evolution of bridging curriculum.

We can start describing the curriculum change cycle with the teachers' interpretations of what needs to be in the curriculum. At this stage, the results from the past semester or year's work is reviewed and feedback/evaluation from students is taken into consideration. Looking at the sociocultural scenario of teachers at work,

many influences lie behind teachers' interpretations and design of the changes in the curriculum, or of the new curriculum. These influence factors are varied, such as: the existing Year 12 and 13 syllabus; competing bridging programmes; feedback from students; entry requirements into university; student needs; student abilities; teacher educational background; teacher beliefs; pastoral care responsibilities; assessment requirements (internal/examinations); restructuring of programmes (by institutions); innovations; working conditions for teachers; institutional constraints (class sizes, timetable); resources; teaching colleagues; and research.

After the teacher has dereified these influences, she is ready to prepare her course outline and supporting teaching materials. These can be considered as artefacts from a sociocultural point of view. They are reifications of the teacher's interpretations – her thoughts, tempered by all the influences and expressed in a concrete form.

This reification is interpreted by the students in a process of dereification where they bring the course outline and other teaching materials into their plane of lived experiences. The students interpret the course outlines, and other teaching materials provided, under the different sociocultural settings they find themselves in when studying at the institution. The influences on students' interpretations are: teacher explanations; student attitudes; classmates; work habits (attendance, homework); international or domestic student; mature or just out of school; English language ability; degree choice/aspiration; financial support; working or fulltime student; living arrangements; and family.

These student interpretations are eventually reified into the achievement score at the end of their study. However, a sharper scrutiny of the model in Figure 2 shows that the inner workings of reification and dereification can be seen clustered around the core business of 'Studies', and another clustered around the core business of 'Bridging'. The processes around 'Studies' in the model show student interpretations of the course being reified into lecture notes, homework, etc – the more concrete aspects of study. These are then impinged upon by the student's ability to manage time and stress; they are brought into the student's study habits, social and other lifestyles. In other words, they are dereified and brought into the plane of living experiences of the student. Further reifications of their study are faced in the form of tests, exams and assignments, and these are then dereified as the student takes stock of how they have fared in the summative assessments.

The cyclical processes around 'Studies' can be traversed a few times until the end of semester where the final marks are achieved. This process, along with course evaluation, can provide feedback to the teachers on how the course went that year or for that semester. Teachers dereify these results and use this type of feedback as an impetus for change, either to redesign or alter/update their course.

The cyclical processes of reification and dereification around 'Bridging' in the curriculum change model, particularly in the way a teacher redesigns or updates her course, or sets up new courses, are rather unclear. A possibility is that when a teacher is designing a course, she accesses collegial support and feedback. Thus, she may initially reify her idea into a draft document; then give it to her fellow teachers for feedback who, after dereifying the draft document, reify their reactions and thoughts into feedback comments, either in writing or verbally. This feedback is dereified by the teacher who may rewrite her course. Thus the inner cycle (in Figure

2) may be traversed a few times in this way before the new or modified course outline is finalised or published, and the larger cycle of curriculum change is set up.

Although the model developed here of curriculum change in bridging education is based on the cyclic pattern of curriculum change in secondary school education, there are fundamental differences in the two areas of education. Secondary schooling usually has public/national level examinations, e.g. NCEA, whereas bridging education is usually internally assessed by tests and assignments, or by examinations within each institution.

This can be compared to the high stakes national examinations in secondary schools, where the curriculum for the various school subjects is designed by curriculum experts and subject specialists. In the changes in the New Zealand school curriculum in the 1990s, subject specialists were contracted by the Ministry of Education to write curriculum documents for the various subjects. This was a specific project with fixed time frames and monies involved, and the subject specialists interacted with curriculum design experts and thus produced an end product, the curriculum document, with some public consultation along the way and feedback from special committees set up to guide the writers. These curriculum documents were disseminated to teachers throughout New Zealand and teachers had to make sense of the documents, as well as implement the new curriculum in their classrooms. The assessment regime changed at that time too from Bursary to NCEA. Thus, in the research undertaken by Fernandez (2007), the writers of the physics curriculum developed or reified physics education in the form of a cultural artefact, the curriculum document, and the teachers implemented it by dereifying the document and making it a lived experience in their classrooms. In these processes, there were questions of ownership, involving understanding the document and interpreting it in the way the writers had meant it to represent physics education.

In comparison, in the area of bridging education, usually the teacher and the curriculum writer are one and the same. Thus, issues of ownership, understanding the written material, etc. are minimised. There is a history and tradition of best practices, handed down when a new teacher arrives at a bridging education institution. However, the teacher very soon makes the course her/his own as there are no external examinations and criteria to comply by. The constraints for the teacher are mainly the facilities available, timetable, assessment regimes within their institution, and whether they are co-teaching with others. When a new paper or course is to be designed, it is done internally, by the teacher or by someone within the institution, and the teacher readily takes ownership of it.

Thus, while curriculum change in secondary schools involves experts in curriculum subject design the danger is that teachers, who are the implementers of the curriculum, may misinterpret the new curriculum and implement it in other ways than intended. In bridging education, teachers usually are the curriculum developers where they tinker with existing subject curricula or design new papers. The danger is that they are usually not trained in curriculum theory and design; furthermore a number of bridging educators are subject specialists and may not have teacher training in their educational background. In some institutions, sessional assistants have been hired to teach the students bridging into universities; they are definitely not in any position to develop curriculum.

Conclusion

The development of this model of curriculum change in bridging education, based on a model developed for curriculum change for secondary schools (Fernandez, 2007), has highlighted for me an area which is quite grey and that needs further research, i.e. research into how courses are designed in bridging education. This would be useful in exploring the processes, in the inner cycle of the model around the core of 'Bridging', involved in the design of a new paper, or redesign of an existing paper, i.e. the teacher as curriculum developer. As listed above, there are many influences on the teacher and, thus, in-depth interviews, to explore teacher views on aspects that are more influential and the processes involved, would be useful in understanding curriculum change in bridging education from a sociocultural point of view. Furthermore, how the teacher actually goes about designing their courses may reveal a range of avenues taken by teachers. Perhaps the type of institution delivering the bridging programme may have an important role to play in those processes. Writing this paper has opened up for me an exciting area of research in bridging education.

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Seeing Things Differently: Issues for Mainland Chinese Students Desirous of Studying in New Zealand Universities

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While Bridging Programmes cater mainly for those New Zealand students whose academic performance needs support or development in order to progress to the next level of their education, the Foundation Studies programme at the University of Canterbury caters specifically for those international students desirous of studying in foreign universities. For a large number of these students, there is little or no issue of academic ability as in their own country they may have just successfully completed secondary studies and gained a university entrance qualification. These countries may place more rigorous and tight demands on university entry than any New Zealand university. However, not all students have achieved this before arrival, as each intake is diverse in its own right and each individual brings their own strengths and weaknesses to influence their future learning.

In the past, students from Confucian Heritage cultures, which include Mainland China, have been deemed to utilize inappropriate rote learning strategies by western researchers and educators. However, it has frequently been noted that, despite these inappropriate strategies, they often manage to achieve high grades. More recently, researchers such as Biggs and Watkins (1996, 2001) have argued that these 'inappropriate' strategies are part of their cultural educational expectations and that areas such as memorisation have been misinterpreted by western observers.

This research aimed to examine the experiences and outcomes of 11 Mainland Chinese students during their year of study in a Foundation Studies programme, using both quantitative questionnaires and qualitative interviews to discover how these students managed their learning, how their personality and different cultural beliefs, educational behaviours and expectations, including previous and present self-regulated learning, appeared to influence their learning; also, whether this had any effect on their experiences and outcomes in the course. While some areas of their learning, and cultural beliefs, such as previous independent learning, effort regulation, and other self-regulatory skills, appeared to be advantageous to their learning in a western educational culture, other areas, such as inappropriate learning strategies, inaccurate perceptions of New Zealand educational expectations and requirements, inadequate English and certain personality traits, appeared to cause them difficulties, misconceptions and confusion. Short or long-term this may have affected their learning and ability to succeed and gain entry to a western university.

Introduction

In past years, a considerable number of students have come from Mainland China seeking a Foundation Studies Certificate from the University of Canterbury to enable them to study in the New Zealand university system. While some have been very successful in their studies, others have struggled, failed or given up. This research explores whether the areas: ability to learn independently (self-regulated learning); personality traits; and/or cultural beliefs, appear to have an influence on their academic success or failure.

Literature Review

There is little research on how Mainland Chinese students adapt, learn and succeed in our New Zealand educational system, especially in bridging programmes. Research conducted in Hong Kong schools and universities by Biggs and Watkins (1996) has explored the western perception that Chinese students utilize memorisation and a surface approach to learning, rather than understanding and a deep approach to

learning, which western researchers consider more effective for learning (Biggs, 1987 and Ramsden, 1985, cited in Biggs, 1996). Biggs and Watkins argue that apparent memorisation for many students actually involves seeking understanding, either as a prerequisite to memorisation or as its goal. They also point out that if these students practise memorisation and surface learning, it is problematic to explain why they are frequently quite academically successful even in foreign (English) language and learning cultures. Volet, researching Singaporean Chinese students entering Australian universities, (Volet, 1999a; 1999b; Volet & Renshaw, 1995) found that these students are adept cue-seekers and adapt rapidly (within one semester) to the perceived requirements and learning styles of an Australian university. In addition, Li (2002) mentions that Chinese believe all can succeed by effort; thus students are taught to persevere when study is difficult and many espouse an achievement motivation (Biggs & Telfer, 1987; Gow, Balla, Kember & Hau, 1996; Salili, 1995; Watkins and Biggs, 2001). An achievement motivation combines both extrinsic determination to succeed for their families and intrinsic interest in subjects as students utilize whichever style they perceive is required by the teacher and task, is socially acceptable and is most effective for learning.

Furthermore, Chinese culture, while it values education highly (Li, 2004; Wing On, 1996), emphasises teacher authority and guidance (Ginsberg, 1992) and student obedience (Biggs, 1996). Due to this, and large class sizes (Jin & Cortazzi, 1998; Watkins & Biggs, 2001), students expect all information for exams to be provided and its validity to be indisputable.

As a result of this teacher guidance, students often have little experience of independent or self-regulated learning (SRL), an area of Social Cognitive theory, which a number of western researchers have said to be important for 21st century learning (Bandura, 1986; Boekaerts, 1999; Pintrich & De Groot, 1990; Schunk, 2002; Zimmerman, 2002). SRL requires active learning and includes goal setting, time management, self-efficacy (beliefs in one's ability to succeed at a task), and using metacognitive skills (planning, monitoring and self-evaluation), perseverance (effort regulation), organisational learning, and help-seeking strategies, among others, to maximize and maintain learning.

Chinese students come from a predominantly collectivist culture, which values the needs and expectations of their in-group (including family and friends) above their own desires; although it has been suggested that the one-child policy may have resulted in a generation of more individualistic individuals (Wang, Oakland & Liu, cited in Winter, 1996). Thus, students may actually view others' expectations as their own (Markus & Kitayama, 1991), without experiencing the conflict that western goal theory proposes when an individual's goals are established or restrained by others (Bandura, 1997; Locke & Latham, 1990).

Western theories have also suggested that epistemological beliefs about knowledge and how it is constructed (Baxter Magolda, 1992) may influence a student's perspective on learning and whether they utilize a surface or deep approach to learning. However, Zhang (1999), examining Mainland Chinese students' epistemological beliefs, found students' belief levels to be the reverse of North American college students. As this present research appeared to show no clear connections between epistemological beliefs and student behaviours, although beliefs were similar to Zhang's findings, this area will not be developed further here.

Methodology

This research was conducted using a mixed methodology incorporating three quantitative questionnaires and qualitative semi-structured interviews. The Motivated Strategies for Learning Questionnaire (MSLQ) was developed by Pintrich, Smith, Garcia and McKeachie (1991) within Social Cognitive theory to measure students' levels of SRL using a Likert scale of 1-7; the Measure of Epistemological Reflection (MER) explored students' beliefs about knowledge construction and learning using a short-answer questionnaire (Baxter, Magolda & Porterfield, 1987); and the Chinese or Cross-cultural Personality Assessment Inventory (CPAI-2) used 341 yes/no questions to assess students' personality traits (Cheung, et al., 1998). The first two North American questionnaires, plus a demographic information sheet, were translated into Mandarin, checked and back-translated by native Mandarin speakers, while the CPAI-2 was originally developed in Mandarin as a questionnaire for Chinese people. In addition to these questionnaires, students' high school leaving grades, English entry levels and Foundation Studies results were also collected. The MSLQ and MER questionnaires were administered twice during the year and the CPAI-2 once at the beginning of the course. Finally, students participated in two semi-structured interviews during the year, which were taped and transcribed to provide clarification and supporting data on their personalities, beliefs and self-regulated learning behaviours.

Beginning with 18 Mainland Chinese volunteers from two intakes (February and June) of the Foundation Studies Programme, a purposive sample was attained by selecting male and female students with low, medium low, medium, medium high and high MSLQ overall scores. In this way, 11 students, including five females and six males aged from 17 to 23, were selected to participate in interviews. The 11 students are introduced and key factors for each student are provided in Table 1 below (please note that ABC entry grades indicate mixed grades on a students' high school leaving certificate).

Table 1
Key Student Factors

Student	Age	Gender	Entry grade	Final FS grade	SRL changes	Effort Regulation	Self-efficacy	Goals	Achievement Motivation	Previous Independent Learning	Personality (Dependability)	Memorise versus Understand
Yi Sen	20	Male	A	A	Increase	Decrease	Increase	Own	High	No	Average/ low	Not provided
Yang	17	Male	A	A	Decrease	Increase	Decrease	Own	High	No	Low	Memorise
Lisheng	18	Male	A	A	Same	Increase	Increase	Own	High	Yes	Average/ High	M & U
Hui Xin	20	Female	ABC	A-	Decrease	Increase	Decrease	Own	High	Yes	High	Understand
Huaqing	19	Female	ABC	B	Decrease	Increase	Decrease	Parents	High	No	Low	Memorise
Jing	19	Female	A	B+	Same	Increase	Increase	Own	High	No	Average/ high	Understand
Dayi	18	Male	A	B-	Decrease	Decrease	Same	Own	Low	No	Very low	Memorise
Yi Jie	23	Male	ABC	C+	Same	Increase	Same	Own	High	No	Average	M & U
Fei	22	Female	ABC	C	Same	Decrease	Increase	Own	Low	No	Average	M & U
Zhaopei	18	Male	ABC	D	Decrease	Decrease	Decrease	Own	Low	No	Very low	Memorise
MinMin	18	Female	ABC	D	Same (low)	Same (low)	Decrease	Own	Low	No	Very low	Memorise

Findings

This was a very diverse group of students ranging from a 23-year old who had worked and lived independently for three years, to a young 17-year old who could see no link between learning and everyday life; from a 20-year old with siblings and previous independent learning experience to two young 18-year olds – a male and a female – who appeared lacking in responsibility. Some focused on study and success and others desired to enjoy life and experience the new culture. Some developed self-regulated learning skills, while others struggled to self-regulate if they were too immature or inexperienced. Cultural issues will be examined first and then issues with SRL.

Cultural Issues

Higher educational expectations and pressure in China

Within this diversity, all students commented on the importance of education for their future and a number mentioned their lack of options if they desired a successful future. For example, Huaqing, in her first interview said 'We don't have choice, we have to study'; Yi Jie declared, 'I have no other choice. I can't go back to China without successful. ... very, very important. It might decide the rest of my life' (Second interview) and Dayi commented, 'If I am going to find a job ... must have a degree' (First interview). Min Min added 'You can't have anything [without] the university degree anymore' ... I need a university degree, is very important in China' (Second interview).

Zhaopei further explained:

We know we have no choice to give up and if we feel boring and we must learn it, if we give up this subject, we fail this subject, we have no university, you know, so at the end our future is dark. I think all Chinese students understand this point (First interview)

Teacher authority

According to Zhaopei, you could not disagree with the teacher in China; you might think of disagreeing but there was not time and 'during the exam, they follow the teachers because we need the marks' (First interview) and Min Min pointed out that 'the teachers have to study for the exam first then tell the students what ... should be in there' (First interview). However, both were impressed that whereas 'In China ... if the teacher say something and then the students disagree ... the teacher will angry ... in New Zealand we can talk in class, just about this knowledges' (Zhaopei's first interview).

Although the teacher provided all the information, it could be very tiring to assimilate it, for example, 'teacher ... talking and tell you what you have to remember ... and quite often I just can't listen and I just fall asleep in the classroom' (Huaqing's second interview). Zhaopei (and also Yi Jie) described learning as 'Just like the machine ... just no sounds in class but the teacher's sounds and no communication and just do some work' (First interview).

Perceptions of university as easier

Due to the intensity of university study in China, the perception initially among most of the students appeared to be that study in New Zealand and entry to university was easier. As Dayi explained, 'In here you get a C grade, you go to university; but in China ... if you've got 60 percent it's impossible to go to university, you must go to more than 80, 90 percent'. Min Min explained the difference as she saw it: I think [study in New Zealand] is easier ... here if you pass C then you got the entrance to the university ... in China every year is different. ... You never know how good you have to do when you get in (Second interview). In addition, according to Zhaopei, 'If you fail any subjects, of course it's impossible to go to university, whereas here you fail one subject it is okay [but it's no good] ... because in here C, you can pass' (First interview).

Different learning styles

Almost all of the students, except Min Min, Zhaopei and Dayi, appeared to espouse a strong achievement motivation, expressing goals of A grades (Yi Sen, Yang, Lisheng, Jing, Huaqing, Yi Jie and Hui Xin) and scholarships (Hui Xin), as well as improving English skills for Fei and Lisheng.

While memorisation is said to be a common form of learning strategy in China, not all of these students appeared to favour it. In fact, some students, who admittedly were mostly successful high school graduates in their own country, talked of using memorisation plus understanding in order to learn. Lisheng said he still used repetition to help him remember information, 'If I can understand the theory I can memorise this one very good, but if I can't understand it is very hard to memorise' (Second interview). Another student, Fei, mentioned memorising information but said 'When I speak out my brain can think about that ... I can understand the meaning of the sentence' (Second interview).

Jing thought she learnt by 'Understand concept ... do one or two questions to practice and you make sure understand it ...' (First interview). Yi Jie appeared to make connections as well, 'I may find some specific things happen in my own life and I try to use my experience to understand the things I learn in the classroom' (Second interview). Finally, Hui Xin, who had the most experience of independent learning, stated:

I never remember something because I think you can understand ... you can remember the first thing connects ... with this one and then remember this and then I think you can divide it into many parts, they have ... logical relationship. (Second interview)

In contrast, Zhaopei considered that he learnt and remembered information by just reading and re-reading it (First interview); Min Min mentioned that Chinese teachers' verbal repetition had helped her learn, but as this did not happen in New Zealand she struggled to learn (Second interview). Also, Huaqing, in her second interview, commented that for all subjects, except English, memorisation of ideas was required and thus her way of learning had changed little.

Self-regulated learning issues

Due to the Chinese educational behaviour of repetitive teacher-led learning, most of the students appeared to have had limited or inadequate preparation for independent study. The exceptions were Hui Xin, and Lisheng who said, 'Chinese education ... help us to practise for our self study' as 'the more famous the school, the more hard and careless the teachers' (First interview). He added that this meant students had to discover extra information for themselves. In Foundation Studies Lisheng explained, 'Now I spend of my time on doing research or something ... to try my best to learn lots of things ... probably my interest in thing, so I spend much more time' and 'I feel very good ...' (Second interview).

In Hui Xin's case, she had chosen to return to a rural high school for her last year of schooling and commented:

... in the village ... the teachers are not very good. ... He just ... read the textbook and he know how to do practice, but maybe ... don't understand, so that ... kind of support students not so experienced ... but the students ... can learn by themselves and if they even have any problem they could work by themselves without teacher'. (First interview)

Perhaps because of this experience, in New Zealand, Hui Xin described herself as a less independent learner than in China.

Self-regulated learning changes

Although self-regulated learning is seen as a key factor in the ability to learn independently, for most of these students their SRL (MSLQ) scores decreased over the course of the year. The exception to this trend was Yi Sen, whose SRL scores increased.

Effort regulation

Almost all of the students were confident of being able to force themselves to continue studying when it was boring. This effort control or perseverance appeared to be closely linked to the necessity of attaining a good education for future prospects.

Yi Sen said, 'In China ... a good student can force themselves do anything' (First interview) and thus, although he had found lessons 'very boring', he could make himself study for his future. Yang pointed out 'So ... if the subject is boring, ... but it's helpful for to find a job later, so I will work hard ... to overcome that' (First interview); and Lisheng, in his second interview, stated, 'I think if I am not good at English I will fail my next year course, so that's one reason why I continue to [read] English'.

For others it was not so easy. For example, Jing, in her first interview, admitted that, 'I force myself to do it, but maybe I'll not do it as good as the subjects I like ... I think at least I can pass'. Of those who struggled to persevere, Dayi confessed that 'I don't think I'm doing enough study', yet still thought 'I can pass it ... with C' (Second interview); and Min Min admitted, 'I think some subjects I don't like, I still should study ... But actually I didn't' (Second interview).

Critical thinking

While students' first scores for critical thinking were much higher than North American means, almost all decreased slightly. Therefore, initially, in New Zealand students may do less critical thinking due to their uncertainty about how their previous knowledge is applicable to this new learning situation.

Personal versus parental goals

Most students appeared to choose their own goals (although perhaps with some parental guidance). Huaqing alone mentioned being willing to achieve future goals that were her parents rather than hers. Yet she admitted:

I really afraid I have no interest in that ... I need to do something that can help me to survive in society. ... I'm not going [push myself] when I do that study. I study because I have to and the degree probably necessary for me to get a job. In theory, if I can got a job without a degree, I won't do it [study] actually.
(Second interview)

English levels

English was difficult for all the students; for example, Yi Sen described his studies as 'like holiday' and 'easy ... except English'. However, few appeared to have the intrinsic motivation to improve and, for those who did, time pressure caused this motivation to decline. For example, Fei began with a desire to improve her English, yet in her second interview commented, 'Actually I don't like to learn more about English ... that's the main problem ... I think [English is] a little bit difficult'. In contrast, Lisheng, in his second interviews said, 'I do spend little time in English because English is very hard and very important', and Huaqing said, 'Although [English] is difficult ... [it would be] good for my whole life, I think'.

Personality traits

Min Min, Zhaopei and Dayi all reported very low scores for the Dependability traits of optimism, responsibility, meticulousness and practical mindedness in the CPAI-2. All three of these students achieved grades markedly lower than their entry grades and both Min Min and Zhaopei failed the course initially. Others with low optimism and higher scores on other Dependability traits were not affected in this way.

Discussion

Cultural issues

These students, while diverse in: age; the skills needed to learn and live independently; levels of maturity; ability as measured by grades; and personality, all came from the same cultural background, with basic beliefs in the importance of education. The belief that the teacher is the authority was undisputed by the students in this research, and a number felt that it was safer (at least when exams and thus future choices were involved) to follow what the teacher said, even if in their own minds they felt some doubt as to the accuracy of the information. This was, as a number reiterated, due to the need to pass exams, which were often teacher-set, and the fear of risking their future university chances if they disagreed with the teacher.

In addition, those who considered that New Zealand university study was easier and a C grade was sufficient for entry achieved lower final grades in the Foundation Studies Programme than their entry grades would have indicated, while those who retained their achievement motivation for high grades and success maintained or improved their grades.

Different learning styles

Learning styles may affect learning success if they are inappropriate in another academic culture. It seems clear from comments expressed by Fei, Lisheng, and Hui Xin that, for these students at least, memorisation plus understanding is involved in their learning. Furthermore, those with more experience at independent learning (Hui Xin and Lisheng) considered that understanding was the path to learning and that memorisation could be unhelpful. This provides further support to Biggs and Watkins (1996) hypothesis about the role of memorisation in Chinese learning. However, when lower ability students deal with a high workload, which may encourage memorisation and surface learning, understanding may not occur.

Self-regulated learning issues

In the area of SRL, most students seemed to espouse a high achievement motivation. For those with this motivation, the ability to persevere by engaging effort regulation, despite finding classes repetitive and boring, was often a key factor in their success. This was clearly the case for students such as Hui Xin and Huaqing, while for one student, Yi Sen, developing skill at self-regulated learning appeared to have more effect. For about half of these 11 students, high or increased effort control seemed to play a greater role in student achievement than high self-efficacy, which is viewed by western Social Cognitive theory as a key factor in academic success (Bandura, 1986). Yu (1996) suggests that strong pressure from parents and society to succeed may cause Chinese students to continue to exhibit achievement behaviour even when failure has depleted their achievement motivation. In addition, Eaton and Dembo (1997) conclude from their research that, for Asian students, fear of academic failure appeared to be a better predictor of academic success than self-efficacy. Almost all the students who succeeded (except Yi Sen, whose self-regulated learning scores increased) experienced decreases in other areas of self-regulation, including self-efficacy, yet experienced strong increases in effort regulation. Rheinberg, Vollmeyer and Rollett (2000) say that “People use the [volitional control] strategies ... when they force themselves to control their actions in aversive activities ... However, people differ in their ability to do so” (p. 516). It would seem that these strategies are quite effortful as “force” is needed and “Learners have to remind themselves why learning is important (i.e. awareness of consequence-related incentives, ...) and have to consciously use self-regulatory strategies” (p. 517). Chinese students may be very skilled at using these strategies (possibly synonymous to ‘effort control’ in the MSLQ) when learning becomes tedious and unpleasant, to demonstrate filial piety by achieving academic success. Forcing themselves to persist in the face of difficulties is likely to lead some to self-regulated behaviour and cause others to feel shame and guilt if they fail (Li, 2002).

It appeared that for most students, except Hui Xin with her experience of study in a rural high school and Lisheng whose teachers expected the students to learn for

themselves, limited experience of, or inadequate preparation for, independent study was the norm. Therefore, for these students, study in Foundation Studies with its expectations of some independent learning, resulted in their SRL average scores decreasing over the year as they struggled to adapt to a less controlled way of learning.

For a number of these students, their goals were partly or fully prescribed by their parents. While the western belief is that goals not set by the individual will not be as diligently pursued as self-set goals (Bandura, 1997; Locke & Latham, 1990), Iyengar and Lepper (1999) propose that individuals from collectivist cultures may prefer to have their decisions made by trusted others rather than make personal choices (also Bandura, 1986; Salili, 1994, cited in Salili, Chiu, & Lai, 2001; Schunk, 2002) and that:

... actions that could be seen by rugged individualists as unwarranted usurpations of fundamental individual rights may be viewed by dedicated collectivists as the necessary fulfilment of expected social obligations to family and friends. (p. 363)

Reductions in critical thinking scores and students' constant refrain about the difficulty of English appear to indicate the need for knowledge of the 'cultural assumptions and academic conventions' of a western university as well as good English if they are to succeed (Ginsberg, 1992, p. 6). In addition, Kirby, Woodhouse and Ma (1996) say that if students' English is more fluent this enables them to acquire meaning rather than concentrate on just the surface details of the language. However, many arrive with inadequate English, which prevents or inhibits this. Furthermore, Pintrich, Marx and Boyle (1993) point out that, while prior knowledge is often seen to be advantageous to learning, this may not be the case if the student has prior knowledge that is inappropriate to a new learning context and/or they are unwilling to reassess those beliefs. These inadequacies would seem to encourage memorisation rather than understanding. Chinese students need to be able to utilise the effective learning strategies they acquired in their first language, along with some automaticity in their second language, in order to function and learn effectively in their new environment.

Finally, a number of personality traits within the Dependability factor of the CPAI-2 appeared to have a distinct influence on the academic success achieved by these students and their ability to manage their own learning. Very low dependability scores (optimism, responsibility, meticulousness and practical mindedness) appear to be closely linked to inability to self-regulate. Students with these very low scores, also either experienced marked decreases in their SRL scores or, in the case of Min Min, their maintenance was at a very low level. The main differences between those successful students whose self-regulatory scores decreased and their peers who failed seemed to be higher Dependability scores and increased effort regulation. Increases in self-efficacy for a few students appeared to have no clear effect on outcomes.

Conclusion

While most of the students in this study, had passed highly competitive university

entrance exams in their own country and, thus, had demonstrated that they were more academically able than many New Zealand students in Bridging Programmes, in New Zealand, they still struggled with issues due to personality, SRL and cultural learning differences, yet possess the achievement motivation, perseverance, and so on, needed to succeed once they knew how to adapt. Different educational expectations and requirements mean that what may have been highly effective at school in China is no longer effective, or has a different outcome to what the student expects. One of the key areas in which they struggle, SRL, is seen as vital to success at tertiary study and thus it is important that they are taught and encouraged to develop these skills. If, as Volet's research suggests, students do adapt over time, then the Foundation Studies Programme allows time for this adaptation. Thus, its curriculum should be aligned to university study requirements and academic conventions, rather than existing as a stand-alone course with its own culture, which must then be unlearned as students enter undergraduate study, since constant need to adapt may deplete students' ability to be effective self-regulated learners.

Recommendations

As few of these students seemed to have much previous experience of self-regulated learning, teaching SRL over the duration of the programme, and requiring more independence as the course progresses, may be advantageous. Explanation and practice of learning strategies such as: summarisation, finding key points and so on, may improve students' ability to adapt; and enabling students to recognise connections between past and present learning may facilitate this adaptation.

Furthermore, students' confidence in maintaining their grades or passing did not extend to English, where they lacked skills and knowledge of ability. Thus, it is important, early in the course, to facilitate student understanding of the necessity of continual language learning and mastery, through visiting first-year lectures and listening to past students describing the reality of university study. Students also need to be aware that English language classes are quite unlike Foundation Studies and university lectures, in order that they are not lulled into the false assumption that New Zealand university study will be easier and require less effort than study in their own country.

Finally, as little previous research exists in this area, it is important to carry out further research to explore the experiences, struggles and successes of students from Mainland China and other countries as they participate in Foundation Studies programmes and to establish clear processes by which students may be trained in the different skills and beliefs that will facilitate their academic success in a western university environment.

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'Watch that First Step ...': Two Australian Approaches to Widening Participation in Higher Education

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The promotion of diversity in higher education has been a stated aim of Australian education policy in recent years. A number of programs aiming to facilitate entry to higher education of students from under-represented groups, including students from backgrounds of low socioeconomic status, have been developed; such enabling programs embrace a range of different approaches.

This paper will provide an overview of the contrasting strategies of two enabling programs: the Open Foundation Program of the University of Newcastle and the Tertiary Preparation Certificate offered by TAFE (Technical and Further Education) New South Wales. Both programs share the aims of facilitating access to higher education by students who have not enjoyed past academic success (the 'first step') and of preparing them to perform well at tertiary study (the second). However, the two programs pursue these two aspects of widening participation in such significantly different ways that it would be expected that the results they achieve would present a similar contrast in the nature, if not the extent, of their success.

Relative success at facilitating access to tertiary education is very hard to determine, due to a paucity of data, but examination of the limited quantitative data available on the two programs seems to reveal a puzzle regarding student performance: despite the dramatic contrast in the two programs' strategies, the data appears to suggest that the academic performance of entrants from both programs is quite similar, contradicting the expectation, supported by other research, that such differing strategies would result in quite different levels of success at the 'second step'. This apparent puzzle raises questions concerning the relative efficacy of primarily outcomes-based research as opposed to a deeper analysis of the links between student characteristics and pedagogical and institutional factors for evaluating the success of enabling programs.

Introduction

The promotion of diversity in higher education has been a stated aim of Australian education policy in recent years, with efforts being put into increasing the proportion of people in higher education from groups that have been traditionally under-represented in the sector, such as people from low socio-economic status background (low SES), people from rural and isolated areas and indigenous peoples. Despite efforts to achieve this aim, the proportion of under-represented groups in higher education has not changed significantly (James 2007, p. 6; *Report of the Review of Australian Higher Education*, 2008, p. 30), highlighting again the question of how significant improvement in the equity balance of the higher education sector can be achieved.

Despite an increasing interest in encouraging aspirations to tertiary study in secondary and even primary school students, concern for the current mature-age population has resulted in a major investment of resources in post-secondary programs aimed at preparing mature-age students for university entry and there is a large number of such programs in both Australia and New Zealand. These programs are known variously as 'enabling programs' (the term used in this paper), 'tertiary preparation programs' or (especially in New Zealand) 'bridging programs', and they embody a wide diversity of approaches to the provision of alternative pathways. This diversity of approach inevitably raises the question of relative success: what are the best ways to approach the provision of alternative pathways into higher education?

This paper will examine the contrasting approaches to the provision of such pathways by two relatively successful Australian enabling programs – the Open Foundation program at the University of Newcastle, NSW (OFP) and the Certificate IV in Tertiary Preparation offered by TAFE NSW (TPC) – and note a puzzle concerning their relative success: while they exemplify dramatically contrasting strategies, the outcomes achieved by entrants from the programs, once in tertiary study, suggests that they prepare students for success in higher education almost equally, contradicting what seems a plausible expectation that they will be quite different. It will be suggested that the result demonstrates possible limitations of primarily outcomes-based research into relative success and that there is a need for a program of research examining the links between student characteristics and pedagogical and institutional factors.

The Programs¹

The two programs share the twin aims of enabling access to higher education and of preparing their students for success once they are there, via provision of appropriate content and the development of necessary skills. Completion of both programs results in gaining a tertiary entrance ranking which enables access to tertiary study via the NSW Universities' Admissions Centre (UAC) on a competitive basis with secondary school leavers. However they adopt dramatically contrasting approaches to achieving these aims and appear very different.

The most significant difference, and the one from which most other differences flow, is that the OFP was conceived as, and remains, a university-based alternative to the standard non-school pathways for university entrance; it was designed on the principle that the best preparation for being at university was to be at university, albeit in a suitably modified fashion (Kavanagh and Stockdale, 2007, p. 1). Whereas, the TPC is part of a more general tradition of post-secondary non-university entry pathways. (For summary, see Table 1.)

The Open Foundation Program

The Open Foundation Program (OFP) offered by the University of Newcastle (New South Wales, Australia) is the oldest and largest mature-age enabling program in Australia (Archer et al 2007; Kavanagh & Stockdale, 2007).

The OFP is delivered on two campuses of the University of Newcastle (as well as via a relatively small distance program), using standard university lecture and tutorial rooms. There is no entry test and no tuition fees are currently charged.

Students are required to study two (suitably modified) academic disciplines in one of two modes: part-time over one full academic year, in which each discipline is offered in a two-semester sequence of 10-unit courses (for example, Physics 1 and Physics 2 with Science Mathematics 1 and Science Mathematics 2, for a total of 40 units), and where each semester course requires attendance at two hours of lectures per week (and one tutorial per fortnight); or full-time over one semester, in which students are required to take two 20-unit courses (for example, Philosophy and Core Mathematics), with each course requiring attendance at five hours of lectures per week (and one tutorial per fortnight). The program is required to be completed in one calendar year: if a student withdraws from the program before completion, it must be taken again with no credit available from the previous attempt (although a

significant amount of learning is likely to carry over) (Open Foundation Program information).

Courses are developed in relation to courses in the corresponding undergraduate disciplines in consultation with the faculties. Courses include English Literature and Film, Australian History, Studies in Law, Social Enquiry and Visual Art.

Teaching in the program is by academic staff, most of whom also teach into undergraduate degree programs at the University of Newcastle. All the teaching staff have tertiary qualifications, with the majority also having a research higher degree, but only a minority having any formal teaching training. Teaching is via lecture and tutorial, often to large classes; the teaching approach is a suitably modified version of the approach used in undergraduate programs, with a higher emphasis on student support and an explicit commitment to the development of academic skills integrated into the course content. The general university learning skills support services are available to OFP students.

TAFE NSW Certificate IV in Tertiary Preparation

The Certificate IV in Tertiary Preparation (TPC) is a mature age program offered within the vocationally oriented Technical and Further Education sector by TAFE NSW (New South Wales, Australia). It is one of a range of Certificate IV level programs offered by TAFE NSW which include work-place training and various vocational and trade certificates (www.tafensw.edu.au; TAFE NSW TPC course information [2008]; TAFE NSW TPC course brochure [2008]).

The TPC is delivered at a large number of TAFE campuses throughout New South Wales, using the teaching and student service facilities of TAFE colleges. Students are of mature age and are required to have the NSW School Certificate (or equivalent) to gain entry to the program, which carries a tuition fee – from \$467 (TPC Course Brochure).

The program is available both full-time and part-time and requires attendance for a nominal 720 hours. Students are required to take at least 13 modules, of varying length, from a number of strands, including modules drawn from other TAFE program areas such as General Education modules and vocational programs. Strands include: a set of six compulsory core units of skills competency, all of which must be completed (e.g. Language and Learning Skills, Team Participation Skills); at least two Information Technology modules (e.g. Operate a Word Processing Application, Microsoft Access and Using the Internet); at least two units from each of two General Education strands (e.g. Examine Issues in Contemporary Australian Society, Investigate the Chemical Nature of Matter, Analyse Legal Concepts and Issues); at least one unit from Workplace and Study Skills (e.g. Apply Negotiation Skills in an Individual or Group Context, Calculate and Analyse Statistical Data); and elective units from the previous strands, or from a set of Industry Specific Units of Competency drawn from other TAFE programs (including Finance, Education, Information Technology, Horticulture) (TAFE NSW TPC course information).

It is clear that a significant level of division between content and skills modules is a feature of the program, in keeping with the standard approaches to tertiary preparation courses. Teaching staff are employed as teachers, most of them possessing secondary school or vocational teaching qualifications and overwhelmingly drawn from a technical or secondary school teaching background.

The teaching approach tends to be in a classroom format, with a commitment to 'hands-on' learning support.

Table 1

OFP and TPC Programs: Comparison of formal elements.

	OFP	TPC
Location	University campuses	TAFE College campuses
Entry requirements	Open entry; mature-age students	School Certificate or equivalent; mature age students
Fees	No tuition fees	Substantial tuition fees
Program structure	1. 40 units total across two disciplines 2. 1 year part-time or 1 semester full-time	1. At least 13 different course modules 2. 720 hours (nominal)
Courses	Developed in relation to undergraduate university courses	Dedicated skills modules, plus others drawn from a range of existing TAFE General Education and vocational courses
Staff	1. Employed as <i>academics</i> 2. Typically tertiary qualifications and experience	1. Employed as <i>teachers</i> 2. Typically secondary school and/or professional qualifications and experience
Teaching principles and methods	1. University teaching approaches 2. Integration of skills and content (although skills support is available) 3. Lecture and tutorial format	1. Secondary school format, generally 2. Separate modules in skills and content 3. Classroom format

In addition to the clearly identifiable formal differences, there is clearly also a significant cultural difference between the two programs. In contrast to the externally offered TPC, the OFP is explicitly designed to encourage, indeed, to a significant extent, to compel, students to share in as many aspects of university life and culture as is possible. The location of the program on the university campus and the sharing of all facilities – classrooms, library, social, sporting, bookshops – with undergraduate and postgraduate students of the university engages OFP students with university life and culture as an integral part of the tertiary preparation process.

This difference is as difficult to quantify as it is obvious (and demands further research); what is not obvious is its effect on the successful transition from the individual's prior cultural and social context to the university context. For the students from low SES backgrounds, who are a major target of these programs, the socio-cultural context of the TAFE campus, with its emphasis on trades and vocational training and its relative closeness to the feel of the secondary school, is likely to be a more familiar and non-threatening environment than that of the university. This could become a crucial factor in a student's decision to take a particular enabling program, or to undertake an enabling program at all.

Two Contrasting Enabling Strategies

The OFP and TPC share many characteristics: both aim at widening participation in higher education, especially of students from lower SES groups; both provide, upon successful completion, a tertiary entrance-ranking allowing access, on a competitive basis with students from the standard secondary school pathway, to higher education. Both have a significant degree of success. However, the programs differ quite dramatically in the means they adopt to realise their aim. Indeed, they could

not present a greater contrast in their strategies to widening participation in higher education, exemplifying two quite different profiles of 'steps' in the pathway to higher education. These contrasting strategies can be usefully characterised as the 'high-low' and the 'low-high' strategies.

The OFP can be seen as a 'high-low' strategy, in that it initially demands a substantial leap into the unknown pedagogical and cultural academic domain of the university, albeit into a tailored experience of that domain. While the next step into the higher education institution, after successful completion of the program, is a much less demanding one, in that so much of the pedagogical, conceptual and cultural environment is already quite familiar from the process of qualifying for entry.

The TPC, on the other hand, is 'low-high', in that exactly the reverse is true: the initial step is a relatively small one, into an educational institution that is relatively familiar in its cultural and pedagogical aspects. The move from the student's comfort zone is delayed until after the completion of the enabling program when, however, it could be quite a shock for the student to have to move into an unfamiliar environment.

The tension between the two elements noted here is a common feature in the landscape of enabling programs. It arises from a necessary tension in tertiary preparation courses between two implicit sub-aims:

- **A1 Access:** maximise the number of students who are successful at achieving entry into a higher education institution (measured by successful completions as a proportion of enrolments).
- **A2 Performance:** maximise the success rate of students when they study in the higher education institution (measured by performance within the tertiary institution and successful completions of degree programs).

Ideally, we would want a program to maximise both of these objectives at once. However, the pedagogical, social and personal support resources of different programs do not necessarily contribute to the same degree to the two sub-aims; hence there is likely to be a competition for scarce program resources within any program, giving rise to an, at least implicit, trade-off between the two sub-aims. That is, the more tailored a program is to the aim of achieving the marks necessary for an adequate tertiary entry-ranking, as opposed to providing preparation in the academic skills and attitudes suitable to university study, the more likely it is to maximise the number of students achieving entry, but the less likely it is that these students will be successful once they begin university study. It is this trade-off, and different responses to it, that ultimately gives rise to the contrasting strategies of the two programs.

This contrast in strategies leads to the naive expectation that the 'high-low' OFP would be likely to suffer from a high level of student drop-out initially, as beginning students encounter the cultural and pedagogical shock, and a relatively high attrition rate over the course of the program, leading to a relatively low number of students succeeding in gaining entry to tertiary study but, in compensation, a relatively high rate of success within the undergraduate degree programs, due to the familiarity of the academic environment and the high level of preparedness of the surviving students. In contrast, the expectation of the 'low-high' TPC would be pretty much the reverse of this: a relatively high rate of success at the familiar preparatory

environment, but a higher rate of attrition and a relatively low success rate at undergraduate level. That is, it looks likely that the OFP is structured in such a way as to optimise A2 relative to A1 while the TPC is structured in a complementary way, to optimise A1 relative to A2.

The expectation that the OFP would better prepare students for tertiary study has some support in the literature. Cantwell (2004, p. 355) argues that a university-based enabling programme can contribute dramatically to a student having “a sense of knowing what good writing at university should include and, importantly, what [is] required of the student to achieve this” and, further, for many students, “the experience of the foundations course has resulted not only in gaining certain content knowledge, but has also resulted in the beginnings of fundamental metacognitive and affective development” (p. 357) and a significant amount of deep learning (Cantwell & Grayson, 2002, p. 305). It must be noted, however, that such an achievement is highly unlikely to be cost free. Any student has a limited amount of time and a limited rate of assimilation of new learning: the more that the learning aims to go beyond training in the skills required to achieve good results, in a competitive selection process (characterised by the values and standards of the school-based HSC), to enable deep learning, the more difficult the course will become and the more likely it will be that students will lose confidence and leave the program without achieving success.

This is strongly suggestive of a significant level of trade-off, in terms of the pedagogical approach and the focus of effort and, indeed, of the high levels of support, reassurance and confidence-building so necessary for successful completion of an enabling program. Hence, we might reasonably expect a relatively low rate of success at A1 but a much higher rate of success at A2 in the OFP as compared to the TPC. How do these expectations stand up against reality?

Evaluating Success

The research available on these programs is extremely limited and reliable data is hard to find, especially for A1 (access) and any conclusions must be seen as suggestive only, requiring confirmation by further research.

The OFP seems to have been quite successful at this initial access aim. Kavanagh and Stockdale (2007), for example, cite a historical completion rate of around 50% of whom over 90% go on to university study (overwhelmingly at the University of Newcastle). Table 2 (Kavanagh and Stockdale, p. 3) shows the data for 2001-2005 as an example.

Table 2
OFP completions 2001-2005.

Year	Enrolments	Completions	Number progressing to undergraduate degrees at UoN
2001	1360	52.72%	
2002	1708	45.02%	571
2003	1867	47.88%	622
2004	1691	52.93%	682
2005	1551	56.54%	794

The data for the TPC is hard to find as there is a paucity of publicly available documentation on the details of the TPC and TAFE NSW are not readily forthcoming with data. However, figures collected and published for all Certificate IV programs, including the TPC, suggest an overall completion rate for Certificate IV programs of the order of 30% (see Table 3).

Table 3

Certificate IV completion rates 2002-2006 (TAFE NSW 2006).

	2002	2003	2004	2005	2006
Enrolled	57,068	63,241	52,664	51,838	51,535
Graduated	14,113	18,831	16,101	16,176	15,417
Success rate	24.73	29.78	30.57	31.20	29.92

Is the TPC a typical Certificate IV program in terms of these figures? There are indications it is likely to be, in that, while completion rates for individual Certificate IV modules are reasonably high at about 75% (for 2004-06; TAFE NSW 2006), the TPC student must complete at least 13 modules and the cumulative effect of a non-completion rate of about 25% would add up to a substantial figure for overall non-completions. (While a student who has succeeded at one module is more likely than an entering student to succeed at the next, the effect of this is limited and anecdotal evidence from TAFE teachers and administrators suggests that a completion rate for the TPC of about one-third is a highly plausible figure.)

Insofar as the data can be relied on, there is a suggestion here that relative completion rates are actually the reverse of the expectation outlined above, with the OFP appearing to have a higher success rate at achieving access to higher education (A1) than the TPC. However, any conclusions drawn from this data must be treated as suggestive only, as the TPC data is quite inferential.

When we look at the relative success rates of TPC and OFP students, once they reach undergraduate study, there is a little more solid research data available, albeit from some time ago. A team, from the then Department of Education at the University of Newcastle, studied a cohort of students who had entered the University from three alternative pathways – the Open Foundation Program, the (then) Tertiary Preparation Certificate and Newstep (an enabling program similar to the OFP but targeted at 17-20 year olds) – and compared their success after entry to the University of Newcastle rates over a number of factors, including retention rates and performance (measured by grade point averages [GPA] across a 7-point scale).

Overall, the results, from an equity perspective, are encouraging, with socio-economic status not being a significant predictor of student performance and students entering from enabling programs exhibiting levels of attrition on a par for the general student population (Cantwell, Archer & Bourke, 2001, p. 233).

There were no significant differences in the performance of OFP entrants as opposed to TPC entrants with reference to retention rates, which were almost identical for the two groups (excluding students with zero progress), the retention rate for OFP being 85.74% and that for the TPC being 85.99% (Cantwell, Archer & Bourke, 2001, p. 227).

With regard to performance, as measured by mean average GPA, the situation is considerably less clear. On the surface, it appears to bear out the expectation that

OFP students will do better at university study than those entering via the TPC, with the raw scores showing a slightly better mean GPA for both male and female OFP students (Cantwell, Archer & Bourke, 2001, p. 229). (This result reinforces their earlier findings in Archer et al, 1999.)

However, this raw score is misleading, including as it does a number of other factors which are shown to affect the GPA, such as age and, especially, gender (neglected in their earlier study). A multi-level statistical analysis of the data indicates that the difference here is, to a large extent, due to the above average performance of mature female students, who form a much higher proportion of the enabling pathway entrants than of the general student population. After correction for these factors, the analysis shows OFP entrants performing only marginally better than TPC entrants (Cantwell, Archer & Bourke, 2001, pp. 227-8). Indeed, the significance of the effects of age and gender, both relatively high in both the OFP and TPC cohorts, seem to outweigh the influence of the mode of entry, to such an extent that the authors speculate that it is the nature of the students undertaking the OFP and, presumably the TPC, rather than the nature of the program that is the significant factor in the success that is achieved by these students (Cantwell, Archer & Bourke, p. 232). This would suggest that what makes these enabling programs successful is not the nature of the educational experience they provide but the simple fact that they allow access to higher education for a particular class of student who would otherwise be excluded. Such a conclusion is encouraging, from the point of view of our capacity to address equity issues, but offers no guidance concerning the type of enabling program that should be encouraged, or advice as to the improvement of the educational experience offered by individual programs.

For those of us who are putting such efforts into making these programs work, this is a rather disconcerting conclusion to find; it seems to suggest that what we do in the enabling program is of far less significance for the outcomes we achieve than the kind of students we attract to it.

However, this result must be treated with some caution as the research is very limited in both scope and range and the student experience of a preparatory program (equivalent to at least a semester's full-time study and rich in educational experiences) seems unlikely to be so irrelevant to student outcomes. Cantwell and Grayson (2002), exploring this question further in an investigation of change in psychological and metacognitive attributes of students over the course of three enabling programs (OFP, TPC, Newstep), found that OFP students are generally characterised by a predominantly deep approach to learning, important in university study, while the TPC (and Newstep) students exhibited a predominantly surface approach. Noting the importance of exposure to the university learning environment found in the OFP, as a university-based enabling program, in helping to develop key learning strategies, Cantwell & Grayson (pp. 295-296) conclude that pedagogical elements are likely to have a significant effect on student development and hence students' capacity to perform well at university (p. 305). Cantwell (2004, p. 382-383) later argues, from the perspective of curriculum design, that a university-based enabling program has significant advantages for tertiary preparation, in that it encourages the development of deep learning. While the data from the analysis of performance outcomes we began with might seem to suggest that what is most important for the success of enabling program is the capacity to attract the 'right'

kind of student, these analyses of learning approaches suggest, on the contrary, that appropriately designed enabling programs can be 'value-adding' and that pedagogical factors are indeed of importance in enabling program design. A conclusion which will gladden the heart – and satisfy the intuitions – of at least some practitioners.

It is clear that a lot more research is needed to clarify the role of pedagogical factors in enabling programs and to develop a clearer separation of the type of student attracted and the role of the program in student development. For example, we might usefully compare the persistence and performance of cohorts of equivalent age and gender in higher education, who enter from different enabling programs. In particular, we should go beyond the outcomes-based analysis of Cantwell, Archer & Bourke (2001) to a deeper, and hence far more challenging analysis of pedagogical and institutional factors (such as that of Cantwell and Grayson, 2002, and Cantwell, 2004). Given the emphasis the recent Review of Higher Education (Commonwealth of Australia, 2008) places on equity issues, this might be a worthwhile investment to provide some sort of guidance as to how we should go about this process.

The suggestion was raised above, perhaps facetiously, that the type of student being attracted to a program might be a more important factor in university success than the nature of the enabling program itself. It certainly seems plausible, however, that student perception of the formal elements and socio-cultural nature of an enabling program is a factor in the decision to choose *this* enabling program rather than *that*, and ultimately, of the decision to undertake an enabling program at all. Some students, perhaps, are intimidated by the university environment and so (sensibly or otherwise, depending on the quality of their self-knowledge) choose the non-university-based enabling program instead, while others feel that the freedom and stimulus offered by the university environment is what they want (again, sensibly or otherwise). It is entirely possible that students are making 'canny' choices of the type of enabling program which is best suited to them, in terms of their levels of self-confidence, their learning styles and their past educational experiences. On the other hand, it is possible that the choice is more heavily determined by social networking factors, perhaps simply on the basis of the program that they have heard about their friends doing (and succeeding at) and so it is just as possible that they are making extremely poor decisions about the type of program they need ... and whether to do it at all.

Again, a lot more research work is needed into the question of student selection of an enabling program. What is just as important, then, as the question of which of the programs provides a better preparation for university study, may be the fact that both programs exist in order to overcome that first, major barrier to student success, the belief that this is for *me* and that it *can* be done.

Conclusion

This paper presents a portrait of two very different approaches to enabling education and asks what can be deduced about their relative effectiveness. The two programs examined are very different in character, exemplifying two quite different enabling profiles. Such differences raise expectations that their effectiveness, in terms of the two aspects of student success: facilitation of access to higher

education and academic performance and persistence once in higher education, would provide a similar contrast. It is not clear, however, how much this is the case.

In relation to the two 'steps' of those profiles, something has perhaps been learned. To take the second first, there is some evidence for the initial expectation that the university-based OFP does indeed involve a lesser 'second step' (in that it prepares students better for the move into the university environment), although a lot more work remains to be done here. It has been suggested that such research needs to move beyond looking at student outcomes and investigate more closely the interaction between students and the pedagogical and institutional aspects of the enabling programs.

With regard to the first step, the level of comfort experienced in the move into (and hence the actual decision to engage in and then remain in) the enabling program itself, the evidence is a lot less clear. This question has not been much explored. Until it has been, it suggests the importance of having a range of approaches to enabling programs, in particular programs exemplifying such different enabling profiles, so they can cast the net wider and attract more students to have a try at gaining access to higher education. Perhaps, with enabling programs as with so much in life, variety is nice.

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¹ The author of this paper briefly taught on the TAFE program in the late 1980s (then known as the Tertiary Preparation Certificate, hence 'TPC') and is currently employed as the Coordinator of the Open Foundation program, having taught into it for over 10 years. Note that the name of the OFP has also changed and much of the research relied on here refers to the OFP as the 'OFC'.

Perception of Skills Needed for Future Study by Bridging Programme Students

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A presentation of the results of a survey canvassing the perceptions of adult students in a bridging programme about the skills they consider they will need for success in future entry-level academic courses. The survey included a self-assessment of their own level of preparedness for such courses. These were compared with the personal, educational, and linguistic backgrounds of the students and their aspiration goal. Previously unknown data on learner confidence and students' perceptions of their own study skills will be presented. It concludes with suggestions for further research in this relatively little known sector of adult bridging education.

Introduction

There has been very little research on adults in bridging programmes preparing for entry to tertiary academic courses. The more that is known, the greater the chance of students being successful. Many skills have been identified as important for contributing to success in tertiary academic study. The identification of skills by the students is an important step in their acquisition.

The definition of bridging programmes used here is that established by Benseman and Russ (2003, p. 45): "... programmes aimed at giving learners the requisite academic skills that will enable them to enrol in other tertiary programmes to which they would not otherwise have been able to gain entry."

Literature

The skills needed for academic study were investigated in the 1990s in the North American context by Carson, Chase and Gibson (1993), Kuehn (1996) and Valeri-Gold (1996). These studies covered the role of reading, writing and verbal demands on students in an undergraduate curriculum, learners' perceptions of academic reading and writing, and language-related barriers to successful post-secondary education. In general, the researchers found that any attempt to construct a general description of academic demands was limited to the particular institution, or that students thought that the reading and writing demand was based on the content of the particular course rather than on generic academic skills.

Writing as an academic skill was examined in New Zealand by Starks and Lewis (2001). They found that "writing is still an important aspect of both coursework and examinations" (p. 70) and that comprehension of content and clarity of written output were confirmed as the criteria often used for the allocation of grades.

A key understanding in the acquisition of academic language skills is Cummins' (1979 and 2000) idea that the language needed to manage in a native speaker environment, the Basic Interpersonal Communicative Skills (BICS), is markedly different from that of the Cognitive Academic Language Proficiency (CALP)(Cummins, 1979, p. 198).

Linguistic proficiency is directly related to tertiary academic study. Nobody has academic language as a mother tongue, and all students need to be taught to read

and write in it at some stage. As Kuehn (1996, p. 18) points out: “academic language is a second language for all students, regardless of background”. The vocabulary commonly used in academic texts has been collected by Coxhead (1998). Morris and Cobb (2004) found that vocabulary profiles highlighted information about students that correlated significantly with academic success.

Cummins’ model has helped dispel the idea of intellectual deficiency for members who have often been on the margins: “ethnic minorities, immigrants, those who left school early, those on low incomes, people who are unemployed or who work in semi- or unskilled jobs, (and) women with dependent children” (Benseman, 1996, p. 277).

The idea of academic literacy can be examined in light of Corson’s (1997) work on the existence of a particular lexis common in academic discourse. In establishing a threshold level for more formal cognitive/academic language proficiency, Cummins (2000, p. 133) ties these together: “As the research of Corson (1985, 1995) and Nation (1990) demonstrates, the English lexicon used in everyday conversational contexts differs dramatically both in word frequency and word origin from that used in literate and academic contexts.” Morris and Cobb summarise these ideas:

... academic success is amenable to an ability to access and use a higher lexical register when the situation so dictates. Those students who are unable to change lexical gears and shift from an informal, conversational register to an analytical, academic register encounter more and more difficulties at school as the reading and writing demands increase.
Morris & Cobb, 2004, p.78

Language knowledge and academic literacy are tightly woven together and are important for the successful completion of tertiary study (Nation, 2001). For many bridging students, their use will be a new experience. Therefore, the perception of these students in regard to the need for academic skills is important.

Method

A sample from the 312 foundation skills bridging programme students enrolled in a large tertiary institution in a multi-cultural urban environment in New Zealand was chosen for the study.

The programme is a minimum of an 18-week semester, although for over half of the students it was longer. The programme has open entry but, from an initial placement test, containing reading comprehension and numeracy items, students are enrolled into different length programmes. The most competent are scheduled for a one-semester course. Those with greater need of foundation skills, are enrolled into a one-year programme. These groups contained roughly similar numbers of students, with each programme split into six classes. A much smaller number, making up one class of 17 students, was assessed as having the greatest need and was enrolled for an 18-month, three-semester programme.

The paper-based questionnaire contained 31 questions. Five questions collected demographic data on age, gender, ethnicity, country of birth, and age of migration to New Zealand for those born overseas. Participation in secondary

education, highest school qualification and time gap since leaving school; and tertiary experience with questions about the number of years, country of attendance, type of institution, aim of study course and highest tertiary qualification were investigated in 12 questions.

In addition, there were five questions exploring language experience, asking participants to identify their first language, the language spoken at home with family, and the language usually spoken with friends. Those from a non-English speaking background were asked their age of contact with English and the country where that first contact took place. One question about the present course enrolled in and two questions about future educational plans followed. Relationships between all these variables were tested using a Pearson Product-Moment Correlation Co-efficient.

The questionnaire concluded with four open-ended questions probing the participants' understanding of the type of skills they thought they would need in a future course of further study. Participants were then prompted to assess their own ability in the skills they had mentioned by identifying which they were, and which they were not, able to do. The participants were asked what they thought could be done to help them prepare for academic study.

To measure the students' perception of readiness for academic study, participants were asked to indicate their own perceived level by marking a six-point Likert scale. The question asked "Overall, how ready do you feel you are for study in a mainstream course". The scale was on a line from zero with the caption "Not at all" with intervals marked from one to four. The top of the range was marked five with the word "Completely" attached to it. All participants recorded their responses either on an interval mark or between two interval marks, giving 11 possible ratings.

The questionnaire was trialled and two classes were chosen randomly from each of the one-semester and the one-year groups, together with the single class of the 18-month course students. The project was outlined to each of the five classes and participant information sheets distributed. Class members were encouraged to take both the participant information sheet and the consent form home overnight and to discuss the project and their participation in it with others if they wished to. Most consent forms were collected anonymously during the first session. The following day the questionnaire was administered to consenting participants and took between eight and twelve minutes to complete.

Of the five classes surveyed, the two from the one-semester programme produced 30 volunteer participants from the possible 47. The two further classes of two-semester, year-long students, generated 23 out of 35. The remaining class, from the three-semester programme, added 16 of the 17 class members to the sample. Thirty-one percent of the 312 students enrolled in the programme, in five of the 13 classes, were approached. Nearly 70% of these 99 students consented to being involved, representing 22% of the total. Two of the returns were incomplete, leaving a sample of 67 participants.

The questionnaire solicited data that were analysed by descriptive and correlational statistics through the SPSS statistical computer package, and by an analysis of students' answers through cross tabulation techniques for nominal data such as ethnicity and identified skills. Where nominal data could be recorded in binary form, such as participants speaking English as a first language or not, or

having been born in New Zealand or overseas, there were converted.

The study surveyed a cross-section of 67 adult students enrolled in pre-degree programmes and general non-specific foundation courses of at least 18 week's duration. The only previous analysis of participants in bridging programmes in New Zealand was undertaken by Benseman and Russ in 2003. It is useful to compare the data collected in this study to theirs, as the only known reference point to date.

Results

Gender, age and ethnicity

The 2008 sample reflect similar proportions in gender and age and some elements of the ethnicity pattern to that reported by Benseman and Russ (2003). Since the 65:35 female to male ratio reported in 2003 there has been a steady rise in the proportion of female students at this institution. A change to 73:27 was reported in 2007 and in 2008. Females made up 81% of the present sample, due to the predominance of women in one of the sample classes.

In 2003, Benseman and Russ reported 53% of bridging programme students to be under the age of 25. The present sample recorded 66% being between 18 and 25. The increasing number of adults over the age of 40 years in bridging programmes – up to 30% reported nationally (Ministry of Education, 2006a) – was also not reflected in either the institution (13%) or the sample (9%).

There was a correlation at the $p < 0.05$ level between age and gender. Although the proportion of males was relatively small (19%) they were younger than their female counterparts. The most common age for males was 19 years, making up 30% of the sample. Including these 19-year olds, over 60% of males were 20 years of age or younger.

The 2008 sample used for this study was more ethnically diverse than the national figures recorded in 2003, where 46.5% were recorded as New Zealand European/Pakeha and 29.2% Maori (Benseman & Russ, 2003, p. 53). Since then, Maori enrolments in tertiary programmes in New Zealand have increased substantially (Ministry of Education, 2005). Notwithstanding this national growth, the number of Maori in this sample was slightly lower. Maori were the second largest group of the sample making up 25%. New Zealand Europeans were the fourth largest in the sample at 15%, approximately a third of Benseman and Russ's national figures.

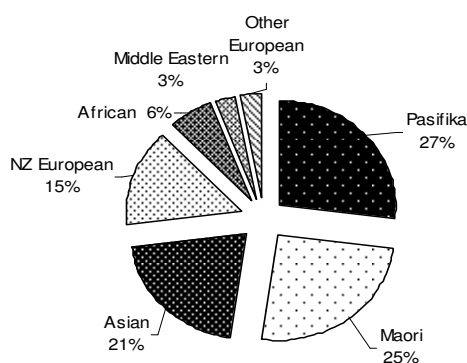


Figure 1. Percentage of Survey Participants by Ethnicity[n=67].

The sample had a higher proportion of students from both the Pacific, 27%, and from Asia, 21%, than would be predicted from national figures. Pasifika peoples were from Samoa, Tonga, the Cook Islands and Niue. The Asian students came from nine different countries. A possible reason for the size of these two groups is the location of the institution, situated as it is in the most ethnically diverse city in the country. The 2006 figures for Manukau City in Table 1 (Statistics New Zealand, 2007), are mirrored in the make-up of the Pasifika and Asian groups in the sample.

Table 1

Ethnicity: Manukau City and New Zealand (Census 2006).

(Totals = over 100% due to multiple ethnicities).

%	European and New Zealander	Maori	Pacific	Asian	Other
Manukau City	46.2	15.3	27.9	21.5	1.5
New Zealand	78.7	14.7	6.9	9.2	0.9

Education details

All but one participant had attended primary school and all but two, secondary school. Of the participants, 91% attended secondary school for three years or more, with 61% gaining a secondary qualification. School Certificate and NCEA Level 1, together with the British qualification GCE 'O' level, were gained by 24% of the sample group. Second level qualifications of Sixth Form Certificate and NCEA Level 2 made up 16%. The remaining 21% reached the third level of secondary qualifications, Advanced Cambridge Certificate, Form Seven Certificate, Higher School Certificate, NCEA Level 3 and/or University Entrance. Two-thirds of participants attended secondary school in New Zealand. Only nine percent did not receive their education in their country of birth, all of those because of their migration to New Zealand.

Table 2

Percentage of survey participants by previous education experience and qualification.

Education Characteristics of Participants [n=67]			
	Highest Education		
	Not Attended Secondary [n= 2]	Attended Secondary: No Qualification [n=24]	Gained Secondary Qualification [n=41]
Female [n= 54]	3%	30%	48%
Male [n= 13]	0	6%	13%
	Highest Education		
	Not attended Tertiary [n=34]	Attended Tertiary: No Qualification [n=20]	Gained Tertiary Qualification [n=13]
Female [n=54]	39%	23%	19%
Male [n=13]	12%	7%	0

There was a very strong positive correlation ($p < 0.01$) between the level of secondary qualification and years at secondary school. The number of years in secondary education was also very strongly correlated with the number of years at a tertiary institution ($p < 0.01$). However, this was not evident in correlations with tertiary success. Although 49% of respondents had attended post-secondary education only 19% have a tertiary qualification. Attendance was no guarantee of success. The holders of the three degrees, three diplomas and seven certificates were older than those with no tertiary qualifications ($p < 0.01$).

Language experience

The survey group, representing 22 nationalities born in 21 countries, spoke 18 different first languages. English was identified as the first language for 51% of respondents. Of the other 17 languages, 12 were spoken by only one participant, with the other five languages, Maori, Tongan, Samoan, Chinese and Hindi, being spoken as a first language by between two and five people.

Sixty percent of participants were born in New Zealand. Three-quarters of these identified English as their first language. Of the other New Zealand-born participants, 10% spoke Maori as a first language, with the remaining 15% shared evenly between the Pasifika languages of Samoan and Tongan. There was a very strong correlation ($p < 0.01$) between being born overseas and having a first language other than English. The nominal data here was converted to a binary statistic.

There was also a similar very strong correlation between a participant's first language and the language spoken at home and with friends. The only variation was the addition of English to the mix of languages spoken by those from a non-English speaking background as they moved into an English-speaking situation. There was a difference in the language experience of respondents in the different classes of the bridging course. Two-thirds of the participants in the one- and two- semester programmes had English as a first language, while all participants in the three-semester programme were second language speakers.

Aspiration of participants

All participants in the bridging programme had a definite idea of the course they were planning to go on to once their foundation course had finished. One participant identified a vocational course as a future aim and was not counted in these data. The remaining 66 participants nominated 11 different courses as the focus of their aspiration, with 51 (77%) planning to enter a degree programme. By far the largest group, 29 (44%), aspired to enter the health sector through a bachelor's degree in nursing. Sixteen were planning a career in education, with six hoping to be accepted for a Bachelor of Education degree to become primary school teachers, and 10 for a degree in Early Childhood Education. A further five had plans to enrol for a range of bachelor degrees in Commerce, Science, Law and Social Work. At the diploma and certificate level, four respondents were aiming for business, with another four for Travel and Tourism. One had plans for a Diploma in Marine Engineering. The remaining 11% of the group (7) were part of a preparation course for the Academic and Problem-Solving Tests as part requirement for entry to the Royal New Zealand Police College.

The aspirations of participants were considered in relation to their enrolment in the one-, two-, or three-semester foundation bridging programme. It could be

expected that the three-semester programme students may be less definite about their future plans as they are 18 months away from future course enrolment. However this group also expressed definite plans, although the proposed courses for most were different from the other classes.

Seven of the 14 respondents from the three-semester group were planning to enrol for certificate or diploma courses in Business or Travel and Tourism. The other half of the class was hoping to enter a nursing degree course (4), an early childhood degree programme (2), or the Police force (1).

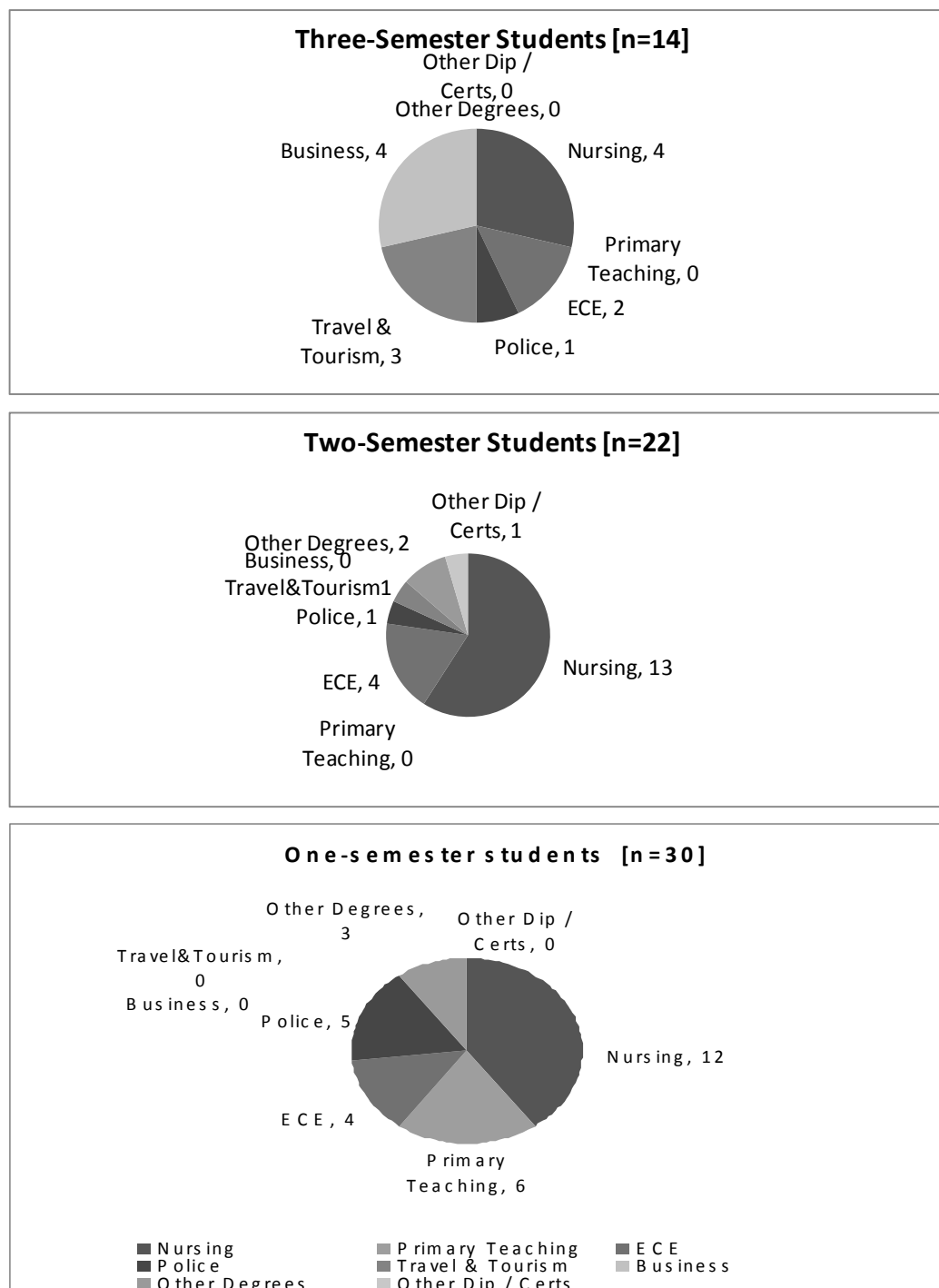


Figure 2. Future aspirations by students in the three different length courses. [n=67]

The majority (60%) of the 22 year-long, two-semester course respondents were planning to train for nursing (13), and early childhood teaching, (4); with the remaining five aiming for either a commerce degree, a science degree, a travel and tourism diploma, a marine engineering diploma or the Police. In the one-semester course all participants had expressed a definite aim, either to enter an academic course leading to a degree or to join the police force. These students had been assessed by the foundation programme staff through the administration of a placement test on entry as being the most capable of the 312 students who had enrolled in the programme that year. The largest group, 12 of the 30 respondents (40%), were again those aspiring to become nurses. Six were aiming to become primary teachers, with four early childhood educators. Five were potential Police recruits. The remaining three had plans to gain a bachelor degree in law, commerce or social work.

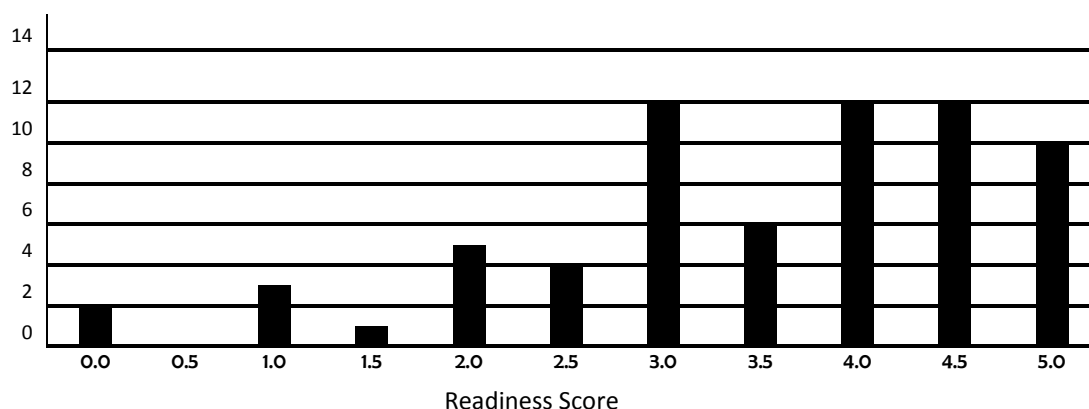
Perception of readiness

A specific purpose of this study was to measure the participants' perception of their own preparedness to embark on an academic programme, and to report what particular skills they identified as necessary for future successful study. The perception of preparedness was measured by participant self placement on a six-point Likert scale. The responses from the 67 participants ranged from zero indicating that they felt not at all prepared, to the maximum, five, being completely prepared.

An overwhelming 84% of participants scored themselves at the midpoint or higher on the readiness scale. The median of 3.5 was a full unit score above the midpoint. This shows the high level of confidence by these bridging programme students in their ability to operate successfully in future academic courses.

Table 3

Participant self perceptions of preparedness for academic study [n=67].



This level of confidence could be better explained if the survey had been of students enrolling in a post-compulsory educational course that they had chosen themselves. Students in the initial weeks of a course for a 'mainstream' tertiary qualification, for which they have paid substantial fees, could be expected to feel confident that they would be successful. Very few people would enrol and pay for a course that they believed they would not complete.

The students in this survey, however, are in their present course, not because

they wanted to be, but because they had failed to be accepted for the course of their choice. They have been redirected to enrol for a bridging programme, which has added costs of both time and expense to their goal. Therefore, it could be seen as surprising that 50.7% of the participants scored themselves at the high end of 4.0 and above. It is not clear if students had this confidence from the beginning of the course. If so, they may harbour a frustration in regard to not initially being accepted into the mainstream course. With this survey taking place eight weeks into the semester, it is possible that these students have had their confidence built up by success in the programme, to a level where they now feel capable of entering and being successful in the future course of their choice.

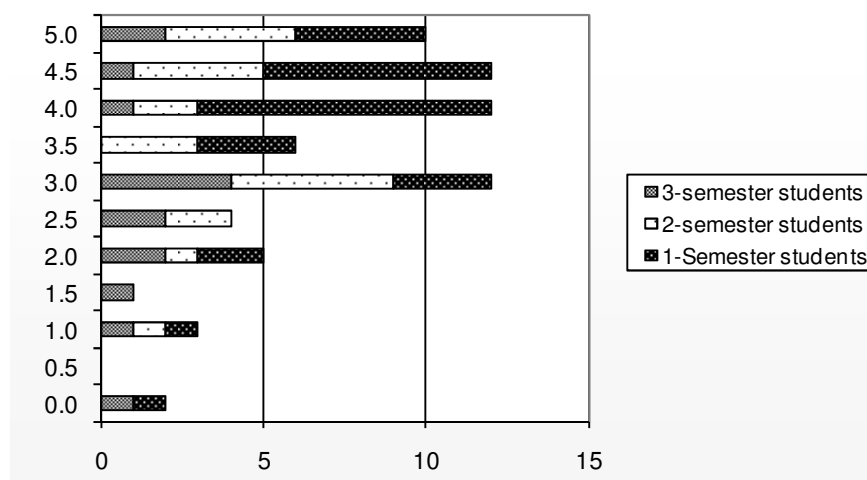


Figure 3. Perception of readiness by students in different length courses [n=67].

Those 34 respondents rating themselves at 4.0, 4.5 and 5.0 were predominantly aged 25 years or under (80%). Although making up only 19% of the total participants, nine of the 13 males also rated themselves at either 4.0 or 4.5 on the scale. Males were generally more confident of their future success. The women were spread across all readiness scores, yet all of the 10 completely confident respondents were female. Similar degrees of confidence in readiness to take part in tertiary education were shown whether the respondents were first or second language English speakers.

There was an expected negative correlation between the students' perception of readiness and the length of the course enrolled in. Students in the one-semester programme rated themselves highly in 53% of the cases. By contrast, 45% of the two-semester students rated themselves at 2.5 or 3.0. In the three-semester programme, 40% were at 2.5 or 3.0, and 33% were below 2.0. Interestingly, two students, in each of the five classes surveyed, rated themselves as completely ready for further study.

A surprising finding was that people with either no experience of tertiary study, or who had been to a tertiary institution but received no tertiary qualification, were more likely to consider themselves ready for tertiary study than those who had a tertiary qualification. Nine of the 13 participants who do have a tertiary qualification scored themselves at or below the mean score for the participants in the study.

Although first language was not a factor in confidence generally, the three who had a university degree arrived as adults after having studied in a non-English environment. A possible explanation, which requires investigation, is that those who have attended tertiary courses, to the extent that they have actually completed a qualification, are all too aware of the time, effort and commitment required to be successful. Those who have not completed, or those who have never undertaken tertiary study, may have an unrealistic perception of the requirements.

An examination of the future plans and perceived readiness ratings reveals the 20% of prospective nurses were confident that they were already completely capable of meeting the requirements of the Bachelor of Nursing course. This was the only cluster of aspirants on the readiness scale by choice of future course. Students hoping to enter other courses were spread across all readiness ratings.

Identification of academic skills

The final phase of the questionnaire asked participants to list the skills they thought were needed in an academic course, and whether they felt they could perform these skills or not. The question was answered by 93% of the participants; just under half of whom identified English, Mathematics, Communication and specialist academic subjects as the four skills needed in future courses (see Figure 4). Examples of specialist subjects are the sciences for nursing students, where many participants nominated multiple science subjects. Mathematics and Communication are core components of the bridging programme being undertaken by the students. Further investigation is needed to ascertain what they understand by 'communication' and how that might be different from what others termed 'English'. Of those that chose English as a necessary skill, 66% of the one-semester programme students specifically stated reading, essays or academic writing as a particular requirement, recognising these academic skills as important. None of the two-semester or three-semester students recognised these as future needs.

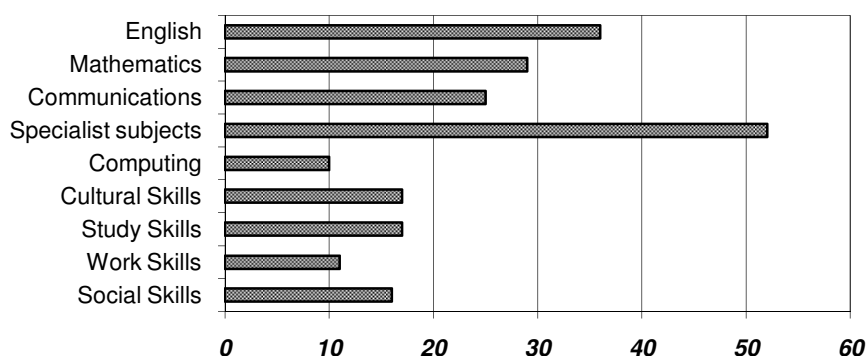


Figure 4. Skills identified by students as required for future study [n = 213].

A quarter of the participants noted general study skills, such as time management, punctuality, examination technique and personal organisation skills, as requirements for further study. These were often linked by the same participant to issues relating to motivation and personal application and conveyed through comments outlining the need to work hard, finish homework and complete assignments on time. Other comments were spread across the diverse skills of

computing (15%), cultural understanding and sensitivity (19%), and personal skills (21%), which included physical fitness, by the students hoping to become police recruits; and characteristics such as being friendly, or being more independent, by students choosing other careers.

When asked to identify skills they were not able to do, nine students made no response to the question. Of those that did respond, 50% stated that there was nothing they could not do or that they were now studying what they needed to know. This reflects the high self-scoring on the readiness scale.

In total, 213 specific skills were mentioned by 58 participants as being required for future study. Of these, over three-quarters of the skills (168) were being met by the bridging programme. Forty percent of respondents stated that all their future needs were being met by the course. A further 48% felt they still needed to learn the more advanced levels of specialist subjects. These are the subjects that make up the academic content of their future courses. It is not surprising that these students have only limited knowledge of these subjects before they enter the future specialist courses. What is surprising is that from the one- and two-semester programmes only three mentioned English, essays or academic writing as a particular need. Five stated mathematics. Fifty-three percent of the second language speakers in the three-semester programme identified their English language skills as requiring improvement.

In making suggestions that would help participants prepare for their future course, 18% offered the comment that what they were learning in the bridging programme was all they felt was needed. A further 24%, commented that it was their own commitment to study, revision, or assignments that was needed, rather than a particular aspect of the course. Twenty-seven percent made no response to this item. Of the remaining 31%, the perceived need was either for academic assistance (18%), for work or study experience in their chosen career (10%), or for support in physical fitness (3%).

The request for academic support was either for English language skills (8) – all from the second language speakers in the three-semester programme – and for individual assistance in an identified weak subject (4), Mathematics. Not one of the respondents who identified reading, essays or academic writing as required for further study commented on needing assistance with these skills when asked what could be done to help.

As mentioned earlier, international and local research suggests that these academic literacy skills are often the ones found lacking in students who have difficulty with a tertiary course. This finding suggests that either the issue is being dealt with in this bridging programme, or that the participants in this survey did not perceive it as a problem for them. Further investigation of this point is needed.

Summary

The study has collected baseline data about bridging course students across age, gender, ethnicity, educational experience, language background and plans for future study. A strong personal belief in their own preparedness for academic study, a previously unknown element of the make-up of these adults, has been uncovered. This confidence exists across all ages and both genders, and the range of ethnicities present, regardless of migration experience or choice of future career. Males, 20 and

21 year olds, and those with at least one secondary qualification, were more likely to rate themselves higher than others. Counter-intuitively, those with a tertiary qualification rated themselves lower on the preparedness scale. A broader sample is needed to test the reliability of this presence of high confidence.

One item of particular interest that emerged from the study, was the make-up of the most confident group who rated themselves as 'completely ready' for further academic study. It was made up of Maori, Pasifika, African, Asian and New Zealand European, evenly split between first and second language speakers of English. Half the group were aged between 18 and 20 but representatives from all age brackets in the survey were present. Although only two had a tertiary certificate qualification, 80% of them had a secondary qualification. All of this group were women.

The least confident group, those that were not only below the group mean but who also ranked themselves below the mid-point on the scale, was made up of predominantly New Zealand-born Pasifika people, and migrants whose first language was not English. Age, gender and career aspiration were dispersed at a level similar to the group distribution. Secondary qualifications were relatively high at 64%, and there was one tertiary qualification, a university degree from overseas held by a migrant making a career change. Three of this group of 11 asked for help with English language skills, while four felt the answer lay with themselves and their motivation and own organisation skills.

For most participants, it was difficult to ascertain what they meant by the response 'English' in their answer to the question about the skills needed in an academic tertiary course. For one group, it is clear: half of the second-language speakers in the three-semester programme specifically stated that they needed English language skills. For the participants in the one- and two-semester programmes, only two stated that they did not have the necessary skills to write essays using academic English. For a significant majority, academic literacy was not identified as a potential barrier to their future success.

Confidence in a positive future outcome plays an important role in the motivation of students to continue studying. This is especially true for 'second chance' learners who have not attained success in their previous formal education contexts. Therefore, the study's finding of a high confidence in their ability to undertake further study is very encouraging. Further research is now needed to check the accuracy of this self-perception.

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Appendix A

Questionnaire Items for Foundation Students

PERSONAL INFORMATION

1. Name
2. Date of Birth
3. Male Female
4. Which Ethnic Group do you identify with?

If more than one, please number main group as 1.

- | | | | |
|--------------------|--------------------|--------------------------|-----------------|
| ___ Maori | ___ Samoan | ___ Fijian | ___ Chinese |
| ___ European NZ | ___ Tongan | ___ Fiji Indian | ___ Korean |
| ___ Pakeha | ___ Cook Isl Maori | ___ Indian | ___ Other Asian |
| ___ British | ___ Nuie | ___ Iraqi | ___ African |
| ___ Other European | ___ Other Pasifika | ___ Other Middle Eastern | |

Other

(please name) _____ (please name) _____

(please name) _____ (please name) _____

Please add any other details that you feel describe the ethnic group you identify with

-
5. What country were you born in?
 6. If you were not born in NZ, how old were you when you came to New Zealand?

EDUCATIONAL INFORMATION

Primary school

7. How many years were you at primary school? _____ years
8. What country / countries was that in?

High School / Secondary School

9. How many years were you at high school? _____ years
10. What country / countries was that in?
11. Did you get a high school qualification? If yes what was it?
12. What year did you leave high school? _____ (for example, 2003)

Study / training after high school

13. How many years of fulltime education after high school have you had?
14. What country / countries was that in?
15. What were you studying for?
16. Have you studied at a university or technical college?
17. If so when? (Give years) _____ For how many years? _____ years.
18. What is your highest educational qualification?

LANGUAGE

19. What language did you first speak as a child?
20. What language do you usually speak at home with your family?
21. What language do you usually speak with your friends?

If English is not your first language, please answer questions 22 and 23

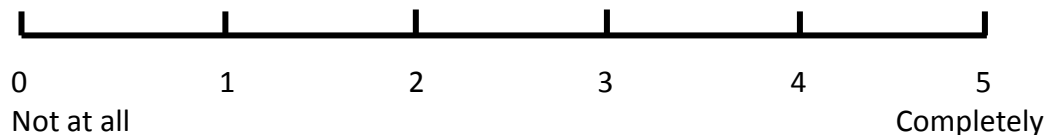
- 22. How old were you when you started speaking English?
- 23. What country were you in when you started speaking English?

FUTURE GOALS

- 24. What course are you enrolled in now?
- 25. Which course are you hoping to enter after completing this programme?
- 26. What is your goal for your future career?

SKILLS NEEDED FOR STUDY

- 27. Could you give a list of things you think you will have to do in a mainstream course?
- 28. Which of the things you have mentioned in Question 27 do you think you ARE able to do now?
- 29. Which of the things you have mentioned in Question 27 do you think you ARE NOT able to do now?
- 30. Overall, how ready do you feel you are for study in a mainstream course? Put an X on the line.



- 31. Can you think of any things that could be done to help you get ready for a mainstream course?

I AM: Self Portraiture in Printmaking that Accelerates the Learning and Confidence of Students in a Foundation Art and Design Programme

Leigh Anderton

Whanganui UCOL

The Students

In our programme, numbers range from around 25 to 40 students each year. Within that group, most years are made up of much the same demographic.

Forty-six per cent are school leavers. Of this group, a couple already have NCEA Level 3 and could get into a degree programme but could not make up their minds which art or design degree to do. Or, they need the experience in a field not offered at their school to get into the degree they have chosen. Many of the group have left school without the necessary qualifications and are hoping that on completion of the Certificate they will gain entry into a programme. Also, a few have joined the course with very little idea of what they would like to do, they just like art.

Fourteen per cent are mature students over 40 and up to about 65 years of age. Of this group, we have many people who have not had the opportunity to explore their art and design capabilities. Some hope it will lead to further study, others just would like a year 'doing art'. Just to say they have tried it.

Twenty-one per cent are single parents aged between 23 and 40. Like the above group, but with many focussing on a future in teaching, this group are often hoping for further study. For some, they are wanting to make changes but find the study and running a family just too much.

Eighteen per cent are in their early twenties. This group have often been working in non-creative jobs, or have been unemployed, and have realized they are going to have to do something about filling their need to be creative.

Many in all of the groups (and this year we have a particularly good cohort of students) have excellent ability but have other obstacles to further study, such as having: time management issues; problematic lifestyle choices eg. drug use; been in trouble with the law; poor health; low confidence; learning disabilities; and Aspergers, to name a few.

Meeting Diverse Student Needs

So, with such a mixture, how do we meet all these needs? We have set up the programme so that students have four days in class and one day where the room is available but there are no tutored classes. It is important that this group have a home room where most of their lessons are taught. This gives a feeling of safety and continuity. In this room, they are provided with their own fridge and kitchen facilities.

They have a tutor in a two-hour block, followed by one-hour of self directed learning and a one-hour lunch break. Then another tutored two-hour block in the afternoon. The two-hour break in the middle of the day is extremely important. Essentially, it gives those students who may have personal life-skill challenges, and a

lot of things going on, the time they need to get the coursework done. It also gives staff time to meet with students to provide the high level of pastoral care required for these students to succeed.

Students have classes four days a week, with a different media each day. We have found this more successful than breaking up the media between the days, and having only one thing to remember each day works well for those students who are learning to plan out their weeks and days. Also, to assist forgetful students and students with lesser means, we have chosen to provide all the materials required on the programme. That is absolutely everything, from a pencil, to a pen drive, photocopy credits, workbooks, and paint. Thus, they all start with a level playing field.

Whatever the media being taught on a particular day, matching learning outcomes are emphasised. Students are at first unaware this is happening but after awhile they realize that their problem solving in one media area, like drawing ,could also work for design.

The / AM Project

This / AM project, which could work just as easily in painting, photography, design or drawing, has been used as a way to develop skills in printmaking – in particular, the use of the dry point process. Self portraiture has been a subject for artists for the last 500 years, and it can be a fun subject, but also a difficult one, not just to make it look like yourself – to attempt it requires a certain confidence from the student artist. For example, if you have never liked they way you look, or object to having your photo taken, or your confidence is low, the whole project could be a minefield.

First of all, we take a photo of each student in profile.



They then turn them selves into roman coin, while they learn the dry point technique.



Basically, this technique involves scratching onto a plate with a sharp tool. The plate can then be printed. Traditionally, this process required engraving on to a metal plate, which would require a mastery of draughting to achieve a likeness. We use clear PVC film that the photo or drawing can be placed underneath, so the student or artist can see through. They are, thus, able to make a good likeness very quickly.

Students are then assisted in researching an artist self portrait, or choosing a portrait from a list we provide. Although we can trust that the more able students will go to the library and find an example in a book or off the internet, it is not so with many students. Even if they have been shown how to use the library by staff, we will often find them wandering up and down the aisles not achieving much, or searching the net unsuccessfully. So our staff go to the library with students and assist them, by showing them the books that may help them choose an image they like. This is something we repeatedly do all year and, gradually, we notice students, who would never normally get a book from the library, finding their own sources.

The amount of research we ask of them is minimal and easily achieved:

Select 3-5 images, with composition and artist's style that interest you, from the following suggestions or your own research. Record the title of the work, the artist's name, date if it is given, and medium. Write down where you found this information. For each work, comment on how the artist has treated space, perspective, viewpoint and composition.

Suggested Artists:

Degas "The Absinthe Drinker"

Edward Hopper "The Hotel Room"

Van Eyck "Arnolfini Marriage"

Vermeer "The Music Lesson"

Andy Warhol "Elvis"

Modigliani "Portrait of Max Jacob"
 Max Beckman "Self Portrait"
 Botticelli "Portrait of a Young Man"
 Rita Angus " Goddess Paintings"
 Paul Hartigan "The Phantom"
 Alistair Nesbit-Smith "Head"
 Wilhelm de Kooning "Woman IV"
 Barbara Hanrahan Any work
 Frieda Khalo "Self Portrait with Loose Hair"



We let the students know that they will be basing their own self portrait on the choices they have made. We then take the students to our local theatre company wardrobe department. Over the years, we have developed a lovely relationship with the retired couple that run this department. They assist our students in finding outfits similar to those of the artists they have picked. Of course, once our students get there, the excitement of the place and dressing up takes over. We find that some outgoing people are really shy in this situation and those we thought of as reserved, revelling in dressing up. So, it is a fun day as people get to break out of assumed roles and place themselves in another role. Once they have done their planned portrait they can opt for something they never would have thought of – like a superhero, an animal, a soldier or a gypsy princess. We let this happen and the project metamorphosises as it goes along because it sparks possibilities and we can always backtrack and find a new portrait that the student can use for research.



Brett as Albrecht Durer



Elle as Andy Warhol



Maddy as Absinthe Drinker



Maddy and Megan as Arnolfini Marriage



Emma as Frida Kahlo



Students having fun being all sorts of things

These photos are then printed out for the students and it is their task to find three possible backgrounds, and to work out scale and size.

Once the selections are made, students then start on their print. This is quite a large task and takes about two to three full days to complete, which is quite an undertaking in endurance and patience. We provide lots of positive feedback – their plates can be placed on an overhead projector so that the scratched marks shine on the wall so we can see how they are going. This provides them with the opportunity to assess their own work and that of others and share how improvements could be made.



The last part is to print up three that are equal in printing technique. The students start this by printing onto cheaper paper, to get their inking up technique perfected, and make adjustments as they go. Then, once that is working well, we move to the Italian printing paper, where they make three prints as identical as possible. Then the work is auditioned by the student. And, finally, we exhibit the prints in a professional manner.

Conclusion

This project provides students with the opportunity to experience themselves as subjects, using drama, theatre, and fantasy, to create an art work. Through this process, they also practice co-operative learning, and, together with library skills, gain specific media process and art history knowledge. The implementation of this unit of study provides a 'rich learning experience' that leads to the achievement of successful personal outcomes.

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Learner Success, Retention and Governmentality in Foundation Learning: A Snapshot from Research

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This paper draws on research data gathered in a recently completed research project – *Foundation learning in the ITP sector: Foundation learners' experiences of success*. Learners taking part in the research commented on a high level of attrition in their classes. They offered contrasting views about this. Some considered early departures a waste and perceived a potential loss to their own learning; a few constructed the early departure of 'disruptive' students as 'good riddance' and beneficial to their learning. The paper uses Foucault's notion of governmentality to come to grips with these contrasting views.

Introduction

This paper originates in research investigating the experiences of foundation learners in Institutes of Technology and Polytechnics (ITPs), a project commissioned by the ITPNZ Foundation Education Forum. Specifically, the project investigated how ITP foundation learners experience their learning and what they consider to be success; what personal experiences enabled them to identify such success; and how institutional and non-institutional factors contribute to their sense of success. The research used focus groups to interview a convenience sample of 96 foundation learners in 18 groups from six ITPs. The sample was selected by administrators in each ITP, from learners who were roughly representative of the foundation learners in that ITP and who had enough experience in foundation programmes to be able to reflect on their own experiences and to speak about them.

In our final report (Zepke, Leach & Isaacs, 2008), we found that learners felt that they had experienced success on a variety of 'soft outcomes' indicators. The strongest indicators of success were: considerations for the future (attitude skills); motivation (attitude skills); basic literacy (work skills); learning to learn (work skills); self-esteem (attitude skills); and relationship building (personal skills). Also, well supported indicators of success were; feelings of responsibility (attitudinal skills); self-awareness (personal skills); wellness (personal skills); time-management (practical skills); team work (work skills); problem solving (work skills); and self-organisation (practical skills). Institutional support from teachers and institutional structures were judged to be very strong, helping learners to achieve success. There was evidence that foundation courses and learning contributed to learning transformations, particularly when compared to experiences at school.

Yet, noted by almost half of the groups interviewed, was that their group had experienced considerable attrition in course numbers. Ministry of Education (2008) statistics confirm that attrition in Level 1 to 3 courses, the level of courses usually designated 'foundation', and researched in our project, is significant. In 2006, overall attrition in such courses was 37 per cent for females and 46 per cent for males. Reasons and solutions for attrition and retention have been thoroughly researched. Major syntheses have been completed over the last three decades, primarily in the USA (Pascarella & Terenzini, 1991, 2004) but also in Australia (McInnis, Hartley, Polesel & Teese, 2000), the United Kingdom (Yorke, 1999) and New Zealand

(Prebble, Hargraves, Leach, Naidoo, Suddaby & Zepke, 2004). The latter synthesis used 146 international research studies to offer 13 propositions for improving retention in tertiary education. Given the multiple indicators of success and warm support for teachers and institutions in our study, we were surprised that retention was a significant issue and decided to investigate this aspect of our findings further. In this paper, we first sketch a framework that we think can explain early departure. This framework comprises three discourses: integration, adaptation and governmentality. We then focus on one aspect of the framework, governmentality (Foucault, 1978), to ascertain its influence on early departure. Our conclusion is very tentative. We infer from our data that governmentality, as experienced by students in our sample, had some influence on retention.

Governmentality and Student Retention in Foundation Programmes

Frameworks do not just appear out of nothing. They are backed by such factors as philosophical and ideological assumptions and they also emerge from early readings of data. Both factors have influenced our framework. While we recognize that there are many reasons why students continue to study, we are strongly influenced by two explanatory discourses. In one, institutions seek to *integrate* learners into existing institutional and teaching norms, values and practices (Tinto, 1993). In the other, they attempt to recognise, value and accept learners' existing cultural capital by *adapting* their processes to meet diverse learner needs (Zepke & Leach, 2005). We drew our 13 proposition from these two discourses. But we were also influenced by our reading of the data. Some students in our study experienced early departure of their peers as a loss, others as a boon to their learning. We were taken aback by this finding but found a way of thinking about it in Foucault's (1978) notion of governmentality. In this paper we focus on governmentality to seek clarification about why attrition was so high among these students, who in every other respect experienced success.

The integration discourse

Of our original 13 propositions (Prebble et al., 2004; Zepke & Leach, 2005), 10 addressed the integration discourse. For this paper we have collapsed these 10 into four clusters to better reflect the data. A first cluster of propositions establishes that where institutional behaviours, environments, and processes are welcoming and efficient, retention is enhanced, particularly where academic counselling and pre-enrolment advice are available to advise students. Effective orientation/induction programmes are also important features in this cluster as they facilitate both social and academic integration into learning. A second cluster of propositions addresses social aspects of learning, seen as very important in the retention literature. Included in this cluster are suggestions that students need opportunities to establish social networks. This enables them to work effectively in learning communities and to receive and provide peer tutoring. The third cluster focuses on teaching. Teachers are seen as vital in improving retention. They must be approachable, supportive and be available for academic discussions. In short, they must offer quality teaching: show respect for learners, be fair and unbiased, culturally sensitive, motivational and, importantly, provide a manageable workload. The final cluster concerns the availability of institutional support services. Services highlighted in the literature

include child care, pastoral/religious care, English language support, financial aid, counselling, health services, library support, international students' assistance, women's resource centre, student housing and employment services, study skills assistance, student clubs, sports facilities and cafeteria. The research results provide strong evidence for the argument that providing institutional services facilitates positive student outcomes.

The adaptation discourse

The *adaptation* discourse focuses on broad categories of socio-cultural difference such as gender, ethnicity and socio-economic status or class. Thomas (2002) suggests students who arrive in a tertiary institution with cultural knowledge and practices that are congruent with those valued by an institution are likely to be "fish in water" and succeed. Where their cultural practices are deemed inappropriate or incongruent, they are likely to experience acculturative stress (Saenz, 1999), discontinuity (Padilla, Trevino, Gonzalez, & Trevino, 1997), and feel like "fish out of water" (Thomas, 2002).

Our synthesis included three propositions that may help institutions to provide water for stranded fish. The first addresses the elimination of discrimination. Studies show that the climate created within an institution impacts on student outcomes. As student diversity increases, institutions must create climates that welcome, accept, respect, affirm and value diversity, creating 'an accepting culture' or 'ethos'. The second proposition suggested that retention would be enhanced where diverse learning preferences were catered for. This was not a plea to better cater for learning styles, but a call to recognize changes in the relationship between institutions and mainly part-time students that required a more inclusive approach to students (McInnis, 2003). The final proposition suggested that institutions should examine their own cultures for bias. Studies found that where institutional cultures are accepting of difference and facilitate a greater match with students' personal identity, higher rates of student retention and success are achieved.

Governmentality

The integration and adaptation discourses focus on what institutions can do to retain students. They do not analyse the underlying mechanisms and dynamics that might influence a student to leave or stay. The notion of governmentality enables us to conduct such an analysis. Governmentality is referred to by Foucault (1991) as the conduct of conduct – the effort to create governable subjects through various techniques developed to control, normalise and shape people's conduct (Finyar, 2008) and is present in all routine activities (Usher, Bryant & Johnstone, 1997). It has two aspects – governing others and governing one-self. Governing is concerned with the exercise of power and how power is exercised in human encounters. As Lemke (2000) points out, power is about organising the conduct of others and involves notions of regulation, control, shaping and directing behaviour to particular ends. In relation to learning in foundation programmes, governmentality affects both groups and individuals.

We have identified three aspects of governmentality that may help to understand underlying states of attrition. The first concerns the relationship between institutions and individuals; whether power issues have emerged in our

data that might explain early departure. More precisely, we want to know whether student resistance to the exercise of power creates conditions for early departure (Mills, 2003). The second concerns group formation, identity building and behaviour. Tuckman (1965) argues that, in groups, power is constantly exercised and flows into internal and external relationships. We were interested to know whether internal group power dynamics had influenced students' attitudes to those leaving early. Governmentality also recognises the importance of self-disciplining, in using power on one-self to conform to others' expectations, norms or rules.

Findings

In this section we present project data that sheds light on the three kinds of governmentality we identified that may have impacted on student attrition: institution/individual relationships, group formation and self-disciplining.

Institution/individual relationships

Foundation students were overwhelmingly positive about their teachers and valued the support provided by the institutions. They said that teachers were enthusiastic, passionate, caring, approachable, encouraging, understanding people who held consistently positive attitudes about students. They built relationships with and between the students: *the lecturers know your name; they know a little bit about you* (B6); *the difference here is that we concentrate on getting to know each other and getting comfortable and then studying and that makes the studying easier, instead of sitting in a room with a bunch of strangers* (A1); *it's like they are your mates ... they're down to earth* (E15). They: *treat us like adults ... makes you feel like an adult* (F16); *they are at our level ... easy to talk to and get along with* (E14). The data suggests, therefore, that the discourse of institution/individual relationships may not offer an explanation for the high rate of attrition in many foundation programmes. However, it must be noted that the project was not an evaluative one. Negative experiences were not explored.

What did emerge was an unsolicited comparison between their experiences at school and in the foundation programmes. Fifteen of the 18 groups reported that foundation learning was very different from school, better in many ways. Many of their comments related to the teachers. School teachers were seen as authoritarian, strict and uncaring: *We're not having so much authority ... like the tutors, who pushed down on you, that's what I didn't like at school* (E14); *I went to high school last year and I didn't really like it so I just thought that it would be exactly the same and I was also worried about the lecturers if they were like real strict and didn't care. But they really do* (D10). School teachers patronised and talked down to students: *I despised all teachers. I used to hate them ... They used to talk down on you* (E15); *like when you are at school they treat you lower than what they are* (F17). They treated students as children: *Don't you think it's nice to be an adult, to be treated as an adult instead of some stupid child?* (F18). *I was always told at school I was stupid* (F18). Students wanted to get away from being treated in this way: *I didn't like it at the start of the year because I felt like I was still at school, like that's what I wanted to get away from, was being at school* (E14). In several of these quotations there is evidence of teachers' use/abuse of power as governmentality. Understandably students resist this use of power by leaving school, choosing to enrol in foundation

programmes instead. This data suggests that, were students to experience similar relationships in foundation education programmes, they might well leave before completing the programme. Nevertheless there is no evidence that this was a factor in attrition in this project. Students in the focus groups were positive about their institution/individual relationships.

Group formation

Power is present in all groups, is exercised by individuals and flows into relationships (Foucault, 1991). Group formation contributes to the creation of a positive learning environment (McKeachie, 2002). The majority of comments about groups were positive. Students frequently referred to the importance of being comfortable with class members and how that positively affected their learning. Some found becoming part of a group was quite difficult. They needed others to facilitate their inclusion. However, some students' comments shed light on ways power may have been used to exclude students who did not conform to their expectations. Some implied they may have taken action: *that's really important, that I'm in an environment like that [where everyone gets along] cos I just can't be bothered with crap going on* (B5); *If you want to play up go outside and do it ... you are here to learn* (E13). One definitely took action: *Last semester I was hitting other students. Yeah bro, they provoked me to hit them, I hit them. I hit them good too ... Some other guy didn't want to learn properly and because I didn't really wanna waste him, I walked out and eventually it just got to the point where "oooh you're gonna get wasted now boy" so he got wasted* (A2).

In one group with a high attrition rate the attitudes of those remaining were quite clear: *There was too many in our class ... There's a lot of people put off ... because of the derelicts you get at the beginning ... The interruptions of them turning up late all the time ... Just their attitude, it was like, "Oh God I don't even want to be here", but then there's us here trying to learn and them not wanting to ... There were days that I was nearly in tears just trying to hear over everyone talking in the class to listen to the tutor, it was really horrific, it was really disruptive ... It's disheartening when you try so hard and they're not trying as hard ... And a lot of people just standing around because they had no idea what they were doing because they weren't showing up, that was frustrating ... And the ones that you know are not interested, are not going to pass, they get those valuable clients, when people like us should be getting them ... There's one thing I'd like to change is the numbers they take in at the beginning and what sort of people they take on ... They need a more thorough selection process ... I think it's set us behind and I think the tutors should have more rights in disciplining or doing something with the ones that are disruptive.* They saw advantages to their learning when the less motivated dropped out: *We are like a unit ... We all help each other, we get along really, really well ... we are like a family ... it's a pleasant environment ... helps you feel like you want to be there* (E14). Did these students exercise power to hasten the departure of their 'disruptive' classmates?

Self-disciplining

We become self-disciplining when we exercise power on ourselves to conform to others' expectations and norms. To what extent did these foundation learners

conform to the norms and values expected by the institution and wider society? Education functions to reproduce the existing society (Bourdieu & Passeron, 1990). Some tertiary education policies reflect a desire to have adults develop the knowledge and skills necessary to contribute to the New Zealand economy (Ministry of Education, 2006). Given this, we might expect to find foundation education students learning the norms and values of society and beginning to discipline themselves to conform to these. One example comes from an ex-gang member: *[In the past] I was kinda going, I'd love to steal your car to make me \$500. Now I'd love to come to ask you if I can fix your car for \$500 and give your car back. Yeah, na, it's opened my eyes. Showed me that there's more to life than gangs* (A2). He has begun self-disciplining to live within the laws of society. A second kind of self-disciplining emerges in comments about time management: *I never had one [a routine] before the course. I just used to sleep all day. [Now] I have a routine. I get up in the morning, catch the bus to tech, go home and do some housework and stuff* (F16). Some have disciplined themselves to attend class regularly: *you check my attendance from school. I was never there. Come to this school, I'm here pretty much everyday unless my son's sick* (A2). Such disciplining is a good preparation for employers' expectations. Some are beginning to conform to social and cultural expectations: *Before I started this course I had a problem with my wife because I was dictator. Because of my culture in Africa I can't listen to her ... the husband is the head of the house and we have such problems, now I'm listening to my wife, I'm listening to my children* (C8); *I'm more sociable, last semester I was hitting other students ... because, ya know, I hit guys. That's not acceptable ... But at the end of the day, this semester, no hassles bro, I've changed ... like, I talk to people now* (A2). Some have begun to conform to academic expectations: *How to study in certain ways, academic writing, how to think a little bit differently, to critically think* (A3); *how to write an essay, how to do research* (C8). Many have disciplined themselves to develop the foundation skills considered so necessary by the Government: *Now I am able to write, read and everything* (C8); *I have definitely improved in my spelling* (C7); *Well my maths is pretty good now* (D10). These students were successfully self-disciplining. One possible explanation for the attrition of other students is that they could not or would not adapt to the process of self-discipline necessary for success.

Discussion

There is no evidence in our data to support the view that students left early because institutions exercised their power in a way that persuaded them to leave. Indeed, the extensive and unsolicited data obtained from students damning experiences they had at school suggests that students did not feel an authoritarian impulse from either their foundation programme teachers or the institutions. Even though there were examples of power used to discipline students, as in the experiences of one student who was told to shape up or ship out, teachers were generally seen as supportive, friendly and certainly non-threatening. But this finding does not suggest that power is not exercised on students, merely that it does not seem to persuade them to leave early. Classroom learning is governed by both stated and tacit rules of conduct that students adhere to. Power is also exercised in disciplines (Usher, Bryant & Johnston, 1997) such as motor mechanics, nursing or computing with their many rules of conduct and practice. The ITPs exercise a lot of power and have power

exercised on them. Most enforce rules of conduct about such things as smoking, attendance and classroom behaviour. Government policies demand compliance in financial, academic and structural matters. The national umbrella body for ITPs, ITP New Zealand, for example operates a demanding and regular audit of member institutions. Audits require evidence of compliance in matters such as assessment and moderation, programme delivery, student guidance and support, information for students and admission regulations, staff selection, financial and administrative resources and the collection of evidence about their performance (ITP New Zealand, 2006). Institutions also expect students to leave their cultures at the institutional door and integrate into existing institutional cultures (Berger, 2000; Tinto, 1993). This, another example of governing conduct, did not seem to persuade students to leave early.

There is some evidence that the conduct of groups may have influenced students to leave early. Certainly members in a number of groups had very strong views about the behaviours they expected from others. They expected stimulation, co-operation and mutual motivation to create what they considered to be a positive learning climate. Some seemed quite willing to discipline their colleagues if they did not meet their views on acceptable behaviour. An extreme example was the student prepared to hit people who did not conform to rules of conduct. Other students were happy that disruptive students left, expressing the view that their leaving early helped them achieve success. These examples suggest that such groups operated on foundations of *group think* (Baron, 2005) leading to groups trying to minimize group conflict in the name of harmony without critically testing, analysing or evaluating their own views and behaviours. The result was to stereotype those not fitting into the group culture, avoid dealing with their behaviour and exert direct pressure to conform or leave. Such behaviour may be described as governing conduct as it attempted to normalize group interactions with peers as well as learning processes by attempting to control and shape people's conduct (Fimyar, 2008). However, clearly not all groups tried to manage others' conduct by excluding them. There was also evidence that some groups regretted the attrition in their groups as depriving them of valuable input from those who left. Consequently, evidence that unwanted group members were excluded is uneven. All that can be claimed with reasonable confidence is that some groups may have exercised the power of their group by excluding non-conforming peers.

A feature of Foucault's view on governmentality is his focus on how practices, behaviours and mechanisms are shaped. They are not just imposed by external authorities like governments, institutions or teachers, nor are they only exercised by collectives like classes, but they are also sanctioned by acts of self-authorization (Usher, Bryant & Johnston, 1997). This means that the student is compliant and self-disciplining, a willing participant in her own conduct of conduct. We found much evidence of students exercising self-discipline. Examples ranged from abandoning violence and questioning one's own cultural practices to working hard to learn literacy and numeracy skills and learning personal time management. Most students and educators would see these changes as transformative and positive indicators of success. That they arose from self-discipline would be seen as an additional positive. Foucault neither praised nor condemned self disciplining. He saw it as the natural consequence of an extensive process of normalising practices, mechanisms and

behaviours. The students changed their behaviours in order to better fit the requirements of their institutions. In so doing, they decided to stay and also helped to ensure that educational practices in their programmes could continue to reproduce themselves (Bourdieu & Passeron, 1990). And it is important to highlight that we interviewed students who stayed. A different kind of self-management probably seduced others to leave early. We do not know why and how self-management aspects of governmentality contributed to early departure. We do know that self-disciplining probably retained a number of our sample, almost against the odds.

End Note

A limitation of this paper is that its evidence is compiled from students who stayed. Another, is that the original purpose of the research was to identify student success, not reasons for early departure. Consequently, there is no 'smoking gun' that ties attrition to governmentality. The evidence, then, must be indirect, inferential rather than certain. Nevertheless, some important findings can be reported. Governmentality is a suitable lens through which to view underlying dynamics and processes that can help us to understand retention. Very negative, and repeated, comments about authoritarian practices in schools did suggest that the relationships between schools and students motivated some students to leave early. Contrary to their authoritarian experiences in schools, students in our sample stayed because they respected teachers and were able to accept the technologies of control they experienced in their foundation classes. The strongest evidence for governmentality impacting negatively on retention can be found in the operation of groups. Numerous students mentioned their efforts to clear their learning spaces of unruly and unmotivated students. We have no direct evidence of why and how self-discipline led to early departure. But we do know from our evidence that, in a number of instances, self policing resulted in retention. While the practical results of this investigation are modest, we found that the way governmentality operated in the settings we researched assisted rather than impeded retention.

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Is Lecture and Tutorial Attendance Important for Young Enabling Students: A Preliminary Analysis?

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Newstep is a year long, full-time tertiary preparation program for people aged 17 to 20 years offered by the University of Newcastle, Australia. Students typically have a history of educational and/or social disadvantage and have not qualified for university entrance via 'traditional' means. Currently, students are required to attend 80% of all lecture and tutorial classes in each course per semester. As a preliminary study, the final results (scores) and letter grades of students undertaking the compulsory English course in 2007 (n=195) and 2008 (n=218) as well as an elective Mathematical Studies course in the same years (n=131 and 129, respectively), were compared to lecture and tutorial attendance. Scores in English were significantly affected by attendance at lectures, tutorials and combined classes (lectures and tutorial) in both years. Grades were significantly affected in 2007, but not 2008. The difference in mean scores between groups with 100% and 80% attendance in English was 4.6% in 2007 and 9.3% in 2008. The scores in Mathematical Studies were significantly affected by attendance at lectures, tutorials and combined classes in both 2007 and 2008. Grades were significantly affected by attendance at all sessions in 2007, but only by tutorial attendance in 2008. The difference in mean scores between groups with 100% and 80% attendance in Mathematical Studies was 10.6% in 2007 and 7.4% in 2008.

Introduction

The traditional pathway by which students enter New South Wales (NSW) universities is by completing the Higher School Certificate (HSC) at the end of their secondary schooling, or an equivalent qualification. In NSW, this result is then converted into a University Admissions Index, or UAI, which is a comparative measure to rank all students by weighting and standardising marks from the wide range of courses undertaken. For example, an HSC student obtaining a UAI of 80.0 means that they are placed at the 80% level of their year cohort of all NSW HSC students. A UAI cut-off mark for University entry is subsequently set for each degree programme by university and based largely on demand and available places, with UAI cut-offs generally no lower than 60.0 and often higher.

In 1990, the University of Newcastle (Australia) commenced a tertiary preparation programme, called Newstep, to provide an alternate entry pathway for students aged 17-20 years. Newstep is a one- year full-time programme offering a range of courses including humanities, arts, mathematics and science courses. Prior to 2007, entry was available to students who had not completed their HSC, or equivalent, or had not obtained a high enough UAI to gain admission to University *and* had experienced some form of disadvantage during their schooling. This included factors such as disability or chronic illness, family or personal crises, low income, low socio-economic background, non-English speaking background, and others. In 2007, the disadvantage requirement was relaxed. However, the majority of students coming into the programme still do so with some, and often considerable, educational and/or personal disadvantage.

Apart from the common theme of disadvantage, what type of student enters the Newstep programme? Due to the entry criteria, they are obviously young, with 86.4% aged 18-19 years, and some two-thirds are female. A third of students have a

low socio-economic status, with a further 55.2% having a medium status. The majority of these students are drawn from families with no, or very limited, generational experience with senior secondary or tertiary education. Although 75.6% have completed the HSC, their UAI's are generally very low, often well below 50.

As a result of these factors, Newstep students often commence their programme with an immature approach to learning and bad educational experiences in their past. Additionally, due to a diverse range of reasons, the attrition rate is somewhat higher than undergraduate students and enabling programmes aimed at older students. Hence, a conscious effort is made within the programme's structure to try to maximise the level of teacher-student contact and pastoral care to guide both their academic and personal development. One way in which this is done is by setting an 80% attendance requirement for both lecture and tutorial classes in each course, with students absent from classes required to submit a form explaining their absence. These are monitored and students accumulating absences are spoken with individually, in an attempt to address their attendance issues, but also to explore any factors that may be interfering with their participation in classes and/or engagement with their studies.

However, the value of this attendance requirement has not been empirically tested. Although anecdotal evidence suggests it has a positive effect, it cannot be unequivocally demonstrated if the focus on attendance is beneficial and, if it is, why it is beneficial. Similarly, many other factors are believed to play a role in the performance of students within the Newstep programme, but their nature and level of impact are not conclusively known. As a result, a preliminary analysis was undertaken to commence an exploration of any relationships between class attendance and overall performance and to form the basis of a further, more detailed study to commence in 2009.

An examination of the literature found a substantial body of work dealing with the relationship between lecture attendance and academic performance, dating back some 30 years. This literature fell into two main groups. The first group, found that there was a significant positive relationship between attendance and improved academic performance (Durden & Ellis, 1995; Gump, 2005; Riggs & Blanco, 1994; Rodgers, 2002; Romer, 1993), with some contributing factors being:

- The lecturer making the information meaningful and generating understanding
- Clarification of difficult topics
- Emphasis upon important concepts.

The second group, reported either the lack of any relationship between attendance and academic performance or was somewhat equivocal about the relationship (Baldwin, 1980; Gatherer & Manning, 1998; Van Walbeek, 2004). Some reservations expressed were:

- Absenteeism may be a rational act with the student substituting study for attendance
- The quality and relevance of the lectures and lecturer will impact performance.

One common concern within this second group was the lack of a demonstrated cause and effect relationship.

However, the vast majority of these studies dealt with undergraduate students

and there was nothing found that dealt specifically with enabling education programmes. Although of value, its relevance and applicability to the totally different student demographic found within enabling programmes, and particularly Newstep, remained unknown. Nonetheless, a study by Moore, Armstrong & Pearson (2008) hints at possible answers. Generally, they found that, despite the conflicts and differences mentioned previously, there is sufficient evidence in the literature to support the concept that lecture attendance is important to optimising academic achievement. Further, they found that this was particularly likely to be the case for two groups of students common to enabling programmes – students from non-traditional backgrounds and those that struggle, or lack experience, with the self-directed, independent learning style typically employed in the tertiary setting

The data used in this study came from two major sources. Firstly, weekly attendance rolls for lectures and tutorials were used to examine attendance and absence rates during the first semester of 2007 and 2008. Academic performance data was obtained from the University of Newcastle's student administration system, NUSTAR, and included both a percentage score (score) and a letter grade (grade). Newstep courses are mainly assessed on a combination of 50% progressive assessment during the semester and the remaining 50% from a formal end of semester examination.

Attendance and performance data were examined for two courses within the programme. The first was an academic English course, which is compulsory for all Newstep students, and aims to "Develop oral and written language skills to the standard required for effective participation in undergraduate courses at University" (University of Newcastle, 2008, p. 9). The second was an elective course, Mathematical Studies, which is an introductory mathematics course that provides "Knowledge and understanding of basic mathematics and statistics ... [and]... includes the topics of arithmetic and calculation, basic algebra, equations, linear functions, graphing, basic trigonometry & descriptive statistics" (University of Newcastle, 2008, p. 9).

English

In 2007, 195 students were enrolled in English and in 2008 there were 218. The mean attendance at both lectures and tutorials across all students was not significantly different in both years, at 79.2% in 2007 and 82.1% in 2008 ($t=1.53$, $P=0.13$). The mean score, however, was significantly different between the two years, with the mean score of 59.7% in 2008 and 54.7% in 2007 ($t=2.50$, $P=0.01$).

An analysis of variance, or ANOVA, analysis of the 2007 attendance and performance data was undertaken. This revealed a significant positive improvement in scores associated with increased attendance at lectures, tutorials and combined lectures and tutorials (Table 1). However, there was not a significant relationship between grades achieved and class attendance. A similar pattern of a significant positive improvement in grades associated with increased attendance at lectures, tutorials and combined lectures and tutorials was seen in 2008 (Table 1). However, the significance of the relationship is greater in 2008, when the mean score was also higher. Additionally, there is a highly significant positive relationship between grades achieved and class attendance in English in 2008, unlike 2007.

Table 1

ANOVA results (F-scores) of the relationship between attendance at lectures, tutorial and combined lectures and tutorials (Combined) on final score and grade of Newstep students in the compulsory English course in Semester 1 2007 and 2008. (^{ns} not significant, * $P < 0.05$, ** $P < 0.001$).

	2007		2008	
	Score	Grade	Score	Grade
Lecture	2.69*	0.87 ^{ns}	17.11**	5.63**
Tutorial	4.02*	1.8 ^{ns}	25.79**	7.75**
Combined	2.53*	0.9 ^{ns}	14.24**	4.19**

Figure 1 shows that the mean score in both 2007 and 2008 was consistently in the upper range for combined lecture and tutorial attendances above 75%. Both years, also show a marked fall in mean score for combined attendance below 75%. The difference in mean scores between the groups with 100% and 80% attendance in English was 4.6% in 2007 and 9.3% in 2008.

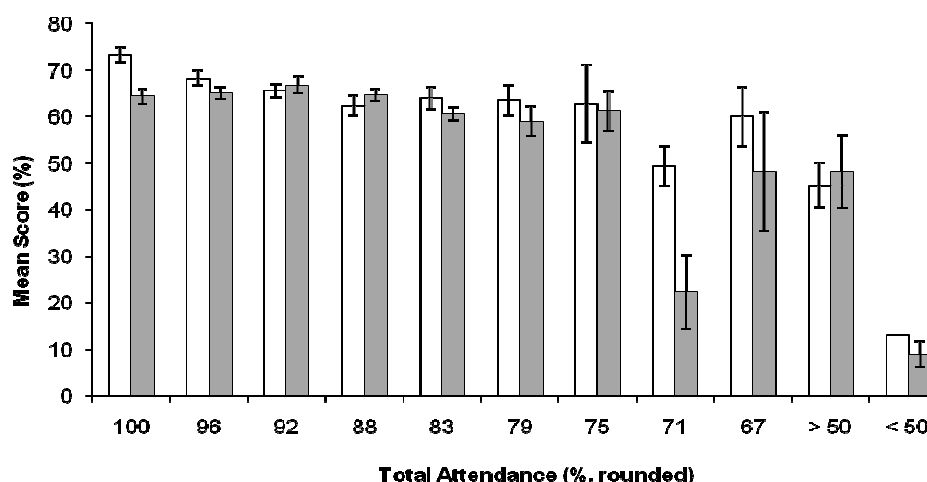


Figure 1. Plot of mean scores (\pm SE) by attendance (lectures and tutorials combined) in the compulsory English course in Semester 1 2007 (shaded bars) and 2008 (open bars).

Mathematical Studies

As Mathematical Studies is an elective course the number of students was smaller than the compulsory English class, with 131 students enrolled in 2007 and 129 in 2008. There was no significant difference in mean attendance in both years, with 84.0% in 2007 and 81.2% in 2008 ($t=1.80$, $P=0.07$). Similarly, the mean scores of 47.9% in 2007 and 52.8% in 2008 were not significantly different ($t=1.79$, $P=0.07$), although they were appreciably lower than for English.

ANOVA analysis of Mathematical Studies attendance and performance data for 2007 revealed a highly significant positive improvement in both scores and grades associated with increased attendance at lectures, tutorials and combined lectures and tutorials (Table 2). A highly significant positive improvement in scores with increased attendance at lectures, tutorials and combined lectures and tutorials also

existed in 2008; however, this did not translate into improved grades, with the only significant relationship existing between tutorial attendance and grade (Table 2).

Although the performance relationship was more variable in Mathematical Studies, an improved score was still associated with attendance levels above the minimum 80% attendance. In 2007, only high levels of attendance were associated with scores at or above the pass mark (Figure 2). In 2008, the pattern was less distinct. Although better scores were associated with higher attendance, there was less of a decline in marks for students with attendance levels below the 80% attendance requirement (Figure 2). The difference in mean scores between groups with 100% and 80% attendance in Mathematical Studies was 10.6% in 2007 and 7.4% in 2008.

Table 2

*ANOVA results (F-scores) of the relationship between attendance at lectures, tutorial and combined lectures and tutorials (Combined) on final score and grade of Newstep students in the elective Mathematical Studies course in Semester 1 2007 and 2008. (^{ns} not significant, * $P < 0.05$, ** $P < 0.001$).*

	2007		2008	
	Score	Grade	Score	Grade
Lecture	20.48**	5.72**	5.66**	1.26 ^{ns}
Tutorial	40.14**	9.56**	6.33**	2.03*
Combined	24.48**	6.20**	4.11**	1.31 ^{ns}

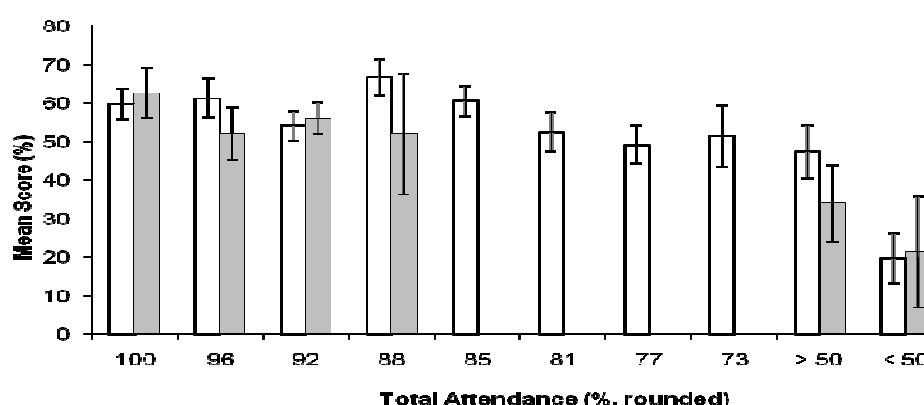


Figure 2. Plot of mean scores (\pm SE) by attendance (lectures and tutorials combined) in the elective Mathematical Studies course in Semester 1 2007 (shaded bars) and 2008 (open bars).

Note: Only small numbers of students had attendance levels in each of the categories of/below 85% in 2007, so data were pooled.

These results highlight two main factors. Firstly, overall compliance with the 80% attendance requirement was good in both English and Mathematical Studies. Secondly, there was evidence of an improvement in academic performance that was correlated with increased class attendance. In both 2007 and 2008, attendance at all lecture and tutorial classes resulted in the highest mean scores in English. Additionally, in 2007 and 2008 there was an appreciable difference of 4.6% and

9.3%, respectively, in the mean score obtained by students attending all classes as opposed to those that met the minimum 80% attendance requirement. The greater difference in scores in 2008 also reflects the significant relationship between attendance and grade achieved. As with English, the highest mean scores in Mathematical Studies were also associated with 100% lecture and tutorial attendance and there was an appreciable difference in the mean score between the minimum 80% attendance level and full attendance. The 7.4% difference in score observed in 2008 was consistent with the gain observed in English in both years, but was less than the 10.6% difference observed in Mathematical Studies in 2007. Despite these improvements, the mean scores remained low and did not, therefore, lead to an increase in grade.

At this coarse level of analysis, there is evidence of a performance benefit from maximising lecture and tutorial attendance in these courses. But is this relationship so straightforward? The answer is clearly, no. Despite the reasonably close fit of the positive relationship between the scores of individual students and combined lecture and tutorial attendance in English in 2007 and 2008, there are still a number of data points that are not adequately explained (Figure 3). For example, in both years there was a number of students with a high level of attendance but low scores. Similarly, there was a number of students with low attendance who achieved comparably high scores.

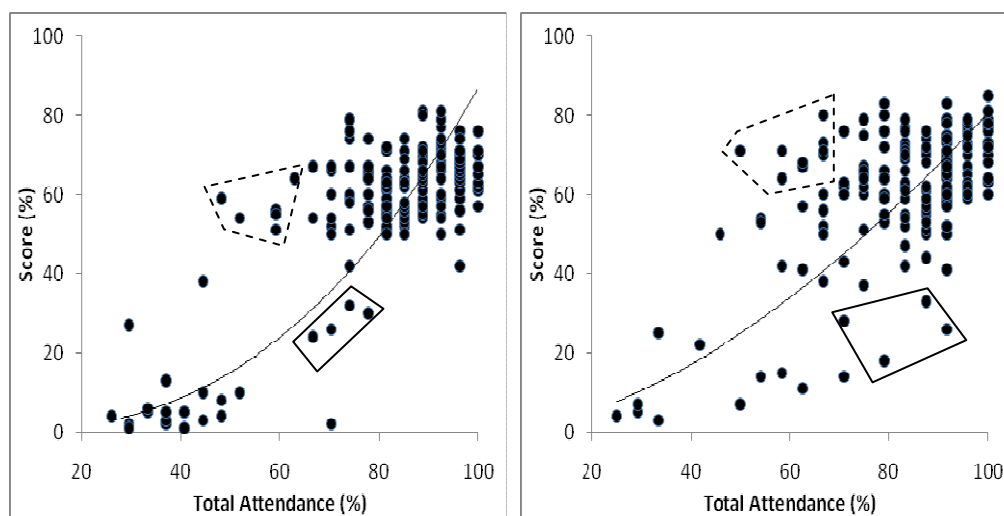


Figure 3. Regression plots of mean scores by total attendance (lectures and tutorials combined) in the English course in Semester 1 2007 (left, $R^2=0.68$) and 2008 (right, $R^2=0.58$). Outlined shapes indicate clusters discussed in the text: dashed line for low attendance/high performance; solid line for high attendance/low performance.

The same pattern applied to the Mathematical Studies data. Again, there were students with high attendance, but low scores, and those with low attendance, but high scores (Figure 4). However, the variation was greater for Mathematical Studies, with considerably weaker regression fits to this data. Therefore, even this preliminary data demonstrates that attendance alone is not the only factor impacting upon performance. The two most commonly identified factors in the literature impacting upon academic performance are motivation and ability (Moore

et al., 2008). Although the available data did not allow a direct assessment of these factors, some proxies existed.

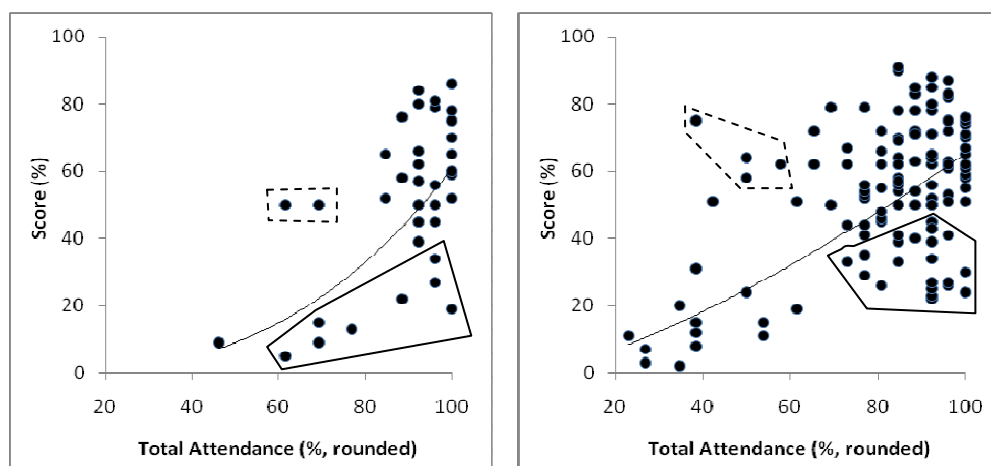


Figure 4. Regression plots of mean scores by total attendance (lectures and tutorials combined) in the Mathematical Studies course in Semester 1 2007 (left, $R^2=0.46$) and 2008 (right, $R^2=0.45$). Outlined shapes indicate clusters discussed in the text: dashed line for low attendance/high performance; solid line for high attendance/low performance.

Firstly, motivation. It is reasonable to assume that a motivated student is more likely to attend a higher proportion of classes, whereas a less motivated student is likely to attend fewer classes. In this case, one prediction would be for a positive relationship between attendance at English and Mathematical Studies classes by the same student or, in other words, a greater propensity to attend all classes by students with a higher level of motivation to succeed. To some extent this was shown by the data (Figure 5), although the strength of this relationship was quite weak ($R^2=0.13$). In particular, there was a number of students with high English, but low Mathematical Studies attendance. Hence motivation may be a factor, but on the strength of this attendance proxy it did not appear to be overly strong and not enough to discount the importance of attendance.

However, this data must be viewed with caution as the relationship could be biased by the programme's minimum attendance requirement. This may also explain the concentration of students with attendance at 80% or more for both subjects.

The other potential factor is academic ability. This study was not designed to specifically examine academic ability, but the available data contained a potentially useful proxy measure. The UAI score, or lack thereof, for students in Newstep was compared with their performance in both English and Mathematical Studies. Assuming that the UAI is a reliable estimator of academic ability, then an expectation of a positive linear relationship between a student's UAI score and their Newstep scores could be predicted.

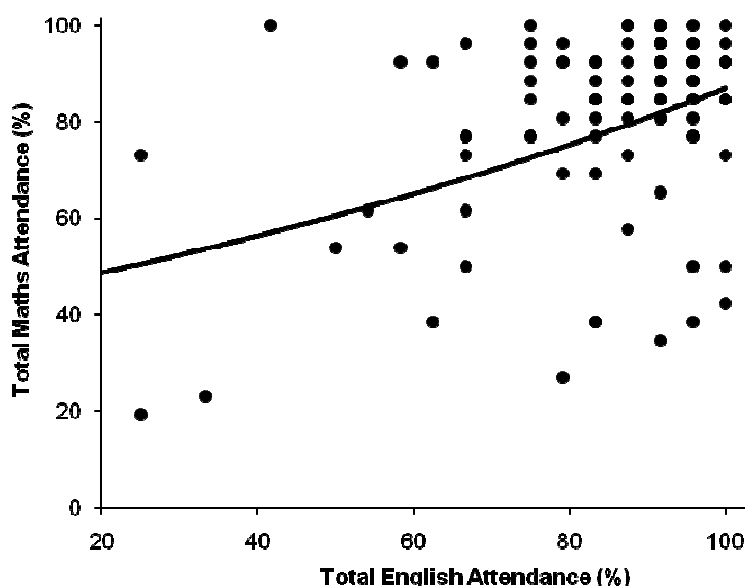


Figure 5. Regression plot of total attendance (lectures and tutorials combined) by individual students for English and Mathematical Studies course in Semester 1 2008 ($R^2=0.13$).

There was some suggestion of this relationship (Figure 6), but there was also a large group of students who did not obtain a UAI or with a very low UAI (less than 40) that obtained a range of scores in Newstep, including some very high scores. Again, this was a less than perfect indicator, but did suggest that academic ability was also not a major determining factor.

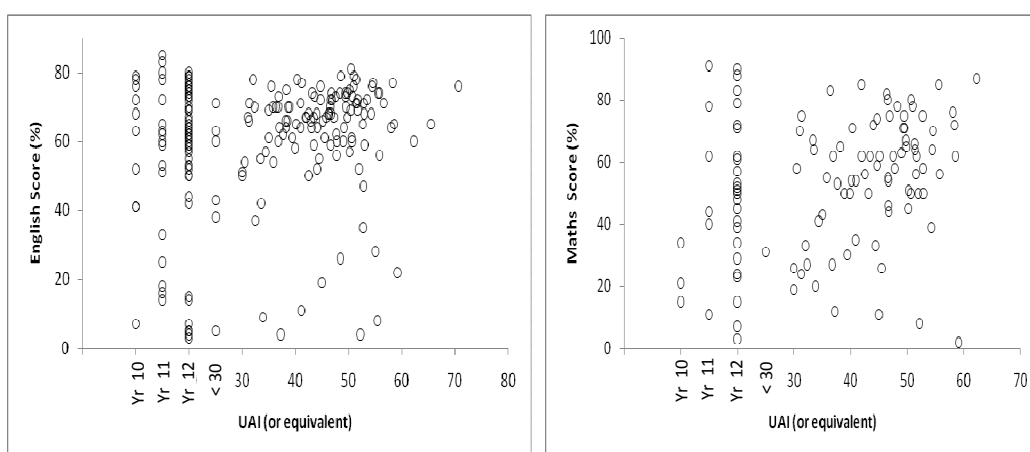


Figure 6. Plot of Newstep scores by individual students for the English and Mathematical Studies course in Semester 1 2008 and their UAI, or equivalent, scores.

Note: UAIs less than 30 are formally reported as a single class (<30); Yr 10, Yr 11 and Yr 12 refer to students leaving school in those years and/or not obtaining a UAI.

Conclusion

What do the results of this preliminary analysis suggest for the Newstep programme and enabling programmes for young students in general? Firstly, there was a very strong indication that attendance at both lectures and tutorials is connected with the level of academic performance demonstrated by a student. Hence, the 80% minimum attendance requirement of Newstep should be maintained. However, it is preferable to keep this as a discretionary requirement for two main reasons. Firstly, a direct cause and effect relationship has not been demonstrated by this study and the observed relationship may be due to factors not yet identified or adequately measured. Secondly, and probably most importantly from an enabling programme perspective, is the fact that many students come into the programme with a range of educational and personal issues and an inflexible approach to attendance is likely to be counter-productive. Instead, attendance should be used as a guide to identify students who are potentially in need of additional support and/or pastoral care. Moore et al (2008) suggested that non-attendance may be related to difficulties coping psychologically or even with the content, processes and schedules associated with their studies.

Finally, it is evident that a more detailed study of the relationship between attendance and academic performance is required and this will commence in 2009. This study will consider other potential factors, such as motivation and ability, whilst looking across a range of course disciplines in an attempt to identify any causal factors and to determine better ways to engage students in the learning process or identify those in need of additional support.

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The Adult Literacy and Life Skills Survey

Paul Satherley and Anne Lee

Ministry of Education

Introduction

This presentation:

- Briefly describes the why, how and what of the Adult Literacy and Life Skills Survey (ALL).
- Outlines some high level results.
- Outlines some more detailed results about numeracy skills, education levels and participation in upskilling.

The presentation aims to be relevant to the kaupapa of the conference – *Pathway to the Future*.

ALL findings were used as part of the background and context for the Skills Strategy and the Literacy, Language and Numeracy Action Plan.

Background

- ALL is an international survey, involving 12 OECD countries (including New Zealand, Australia, Canada, and the USA). Some European countries took part: Switzerland, Italy, Norway, Hungary and the Netherlands. Only one Asian country took part – Korea. Undertaking ALL in different countries enables cross-country skill comparisons, in the light of different education systems, including different educational participation patterns and different economic situations.
- New Zealand undertook ALL in 2006. I would like to acknowledge the work of the National Research Bureau, the Director, Andy Heineman, and, most particularly, the NRB interviewers who encouraged, persuaded and cajoled people to participate in a demanding survey. We also deeply appreciate the time that these New Zealanders gave in being interviewed and completing a test booklet.
- The reasons to undertake ALL, include concerns about skill barriers to economic growth and productivity, and concerns about the role of skills in creating social inequities.
- ALL had a nationally representative household-based sample of adults aged 16-65.
- ALL collected a wide range of socio-demographic information.
- ALL measured adult skill levels in literacy, numeracy and problem solving.

What does ALL measure?

- Prose literacy – understanding text such as editorials, news stories, brochures.
- Document literacy – understanding information in tables, forms, diagrams.
- Numeracy – processing mathematical and numeric information in differing situations.
- Problem solving – analytical reasoning in situations where no routine procedure exists.

These domains are not, by any means, all the kinds of skills that people have, of course, but they are a core group of skills that are fundamental to participating in a knowledge economy and a modern society – skills that underlie other skills and are transferable to different contexts. They are also possible to measure in a large scale survey. Notably, writing and speaking are not included – nor are any of the so-called ‘soft skills’ like interpersonal relations, being able to interact with diverse groups of people, or emotional skills.

The presentation focuses on prose literacy and document literacy and numeracy.

In 1996 New Zealand participated in a previous adult skills survey. It measured prose literacy and document literacy in the same way as IALS. So we have some comparisons over time.

Numeracy Skill Levels

Table 1

Summary descriptors of the different levels of numeracy skills.

Level 5	Integrate multiple types of mathematical information, draw inferences, and produce mathematical justification for answers.
Level 4	Understand a broad range of mathematical information of a more abstract nature including in more complex texts in less familiar contexts.
Level 3	Understand mathematical information in a range of forms. Interpret proportions, data and statistics in relatively simple texts.
Level 2	Undertake one- or two-step processes or estimations, simple measurements.
Level 1	Undertake simple one-step operations in concrete familiar contexts.

Numeracy skill has a continuous spread, but these levels provide a useful tool for understanding broad patterns. The spread ranges from simple one-step arithmetic to complex mathematics requiring inference and justifications. [‘Integrate’ is not in the calculus sense!] The test items always have a practical, applied, everyday context. The other domains have similar descriptors for levels.

Level 3 is considered the minimum necessary for full participation in a knowledge society and economy. So this presentation focuses on grouping levels 3, 4 and 5 together, and mostly groups levels 1 and 2 together.

International Document Literacy

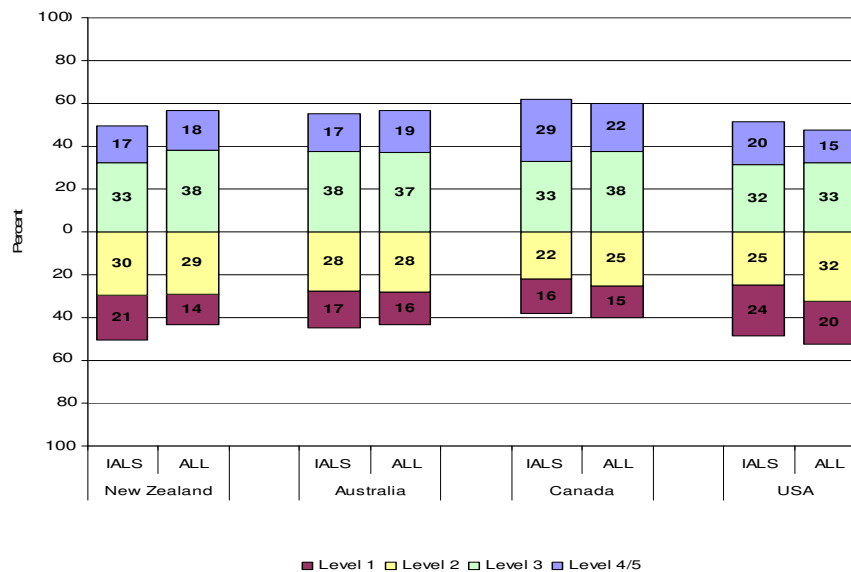


Figure 1. Document literacy skills of adults in New Zealand, Australia, Canada and the US – comparing changes over 10 years.

Figure 1 shows different levels of document literacy skill. Maroon (at the bottom) for those with level 1, yellow those with level 2, green level 3 and the blue those with levels 4 or 5. The graph ‘floats’ at the boundary between levels 2 and 3 because of the view that level 3 and above is what is needed for full participation in a knowledge society and economy. So the height of the column gives a quick visual impression of overall skill level.

Australia and New Zealand have very similar levels. Canadian levels are a little better, but the USA not so good. New Zealand has improved slightly since 1996. Other countries’ skill levels are pretty stable, but the USA has declined slightly.

Document Literacy – Ethnic Groups

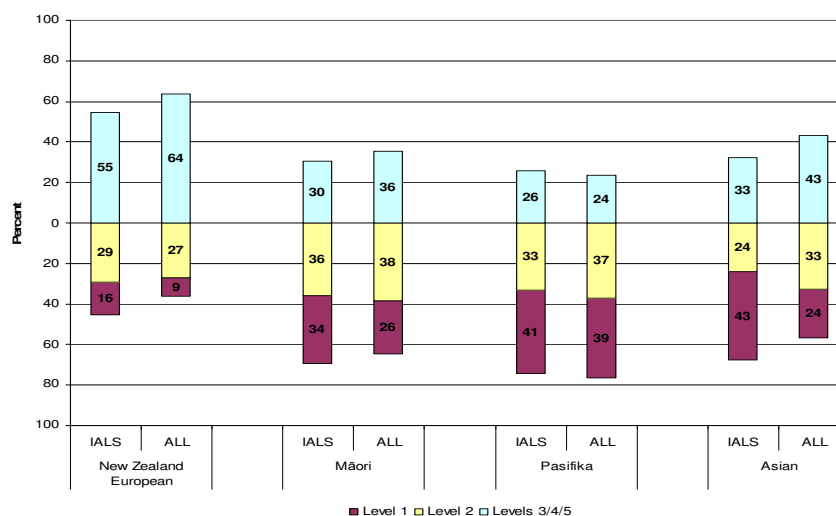


Figure 2. Comparison of changes over time, and between ethnic groups in document literacy skill.

A key message of Figure 2 is that all ethnic groups have a spread between high and low performers. Key factors lying behind these patterns include different proportions speaking English as a second language, different patterns of immigration and different levels of educational participation and achievement.

Numeracy – Education Levels

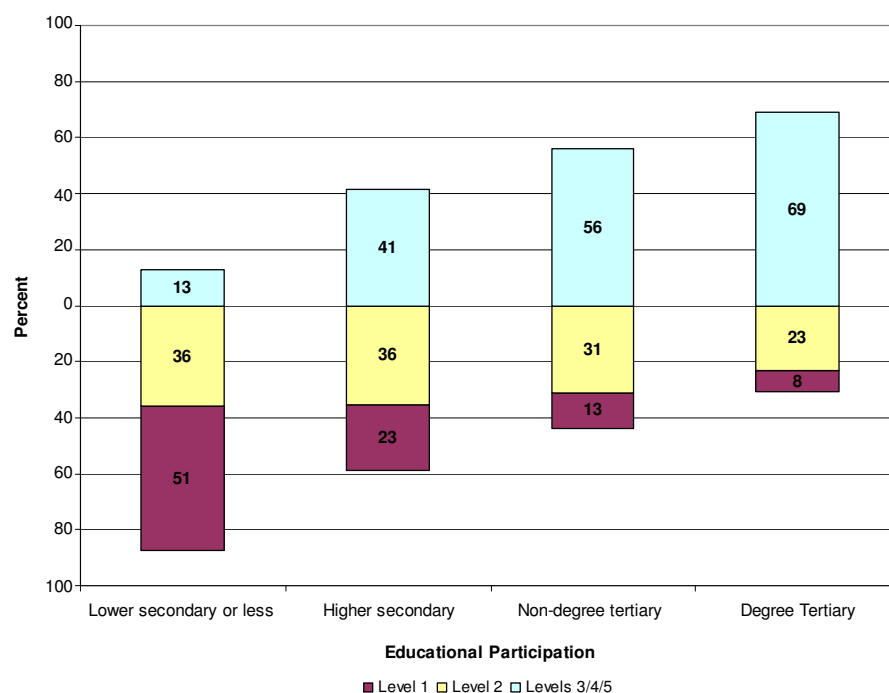


Figure 3. Comparison of respondents' numeracy levels and their education levels.

In Figure 3, Lower secondary is equal to Year 10 or less and Higher secondary is at least equal to Year 11. These levels are followed by Non-degree qualifications, then Degree and above. The graph emphasises the importance of education for acquisition of skills. The graph shows a very strong relationship between education level and numeracy skill – as expected. The majority – 66 percent – of those with tertiary education have level 3 numeracy or above, whereas the majority – 87 percent – of those with lower secondary education or less have level 1 or 2. However, some people with low education do have high skills, and some with high education have low skills – though, for many of the latter, this will be related to English as a second language. Others' tertiary qualifications may be in non-numerical subject matter.

Numeracy – Labour Force Status

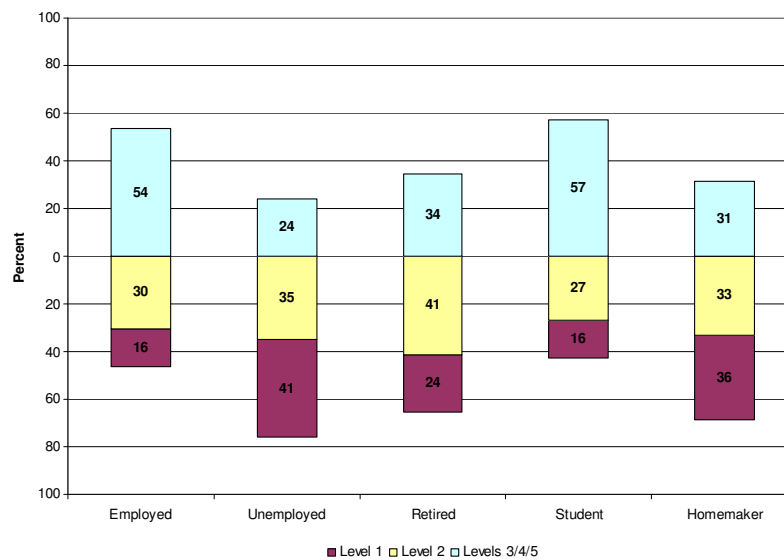


Figure 4. Comparison of numeracy skills and employment status.

The graph in Figure 4 shows that working is important for skills. Those with the highest numeracy skills are the employed and students. This gives us a pointer that a pathway that includes obtaining a high education level, and then working, leads to higher skills.

Numeracy – Age Groups

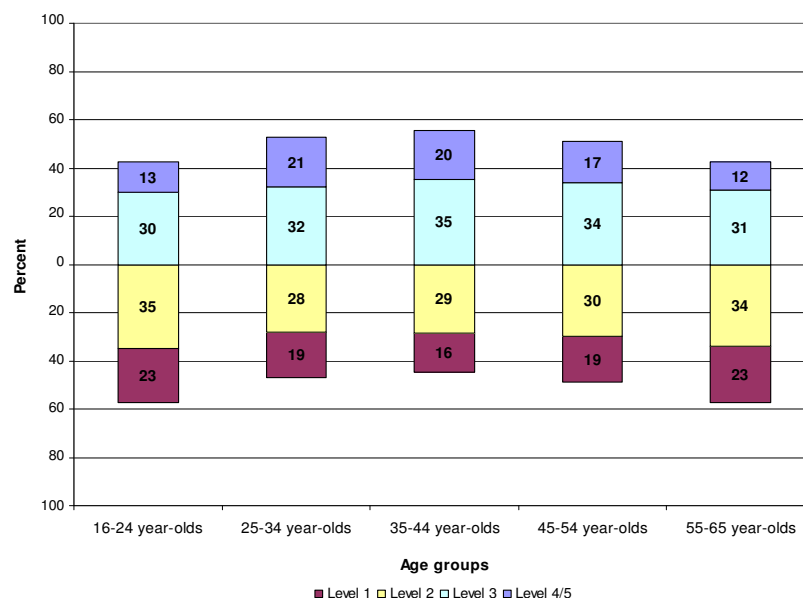


Figure 5. The relationship between age and numeracy skills.

Figure 5 shows that numeracy skills are higher for those in the middle age groups and lower for the youngest and oldest age groups. My own hypothesis about this is that (a) skills grow with increasing life experience, reflecting the applied nature of the test items, and also (b) working helps maintain your skills. By over 55

some people are starting to retire or work part time.

While we are talking about numeracy and demographics: you will be interested to know that men have a relative advantage in numeracy and women in prose literacy. For document literacy and problem solving, men and women perform almost the same.

Types of Upskilling

The ALL survey asked people questions about their participation in education and training activities in the previous 12 months. In Table 2, we have grouped the responses to these questions into 5 broad types of upskilling activities as follows:

Table 2

Types of upskilling activities.

Formal full-time	Courses that are part of a programme leading to a qualification
Formal part-time	
Non-formal	Courses that are not part of a programme leading to a qualification
Self-directed	Guided tours, learning from instructional media, trade fairs etc
None	No participation in any type of education or training

Participation in Upskilling

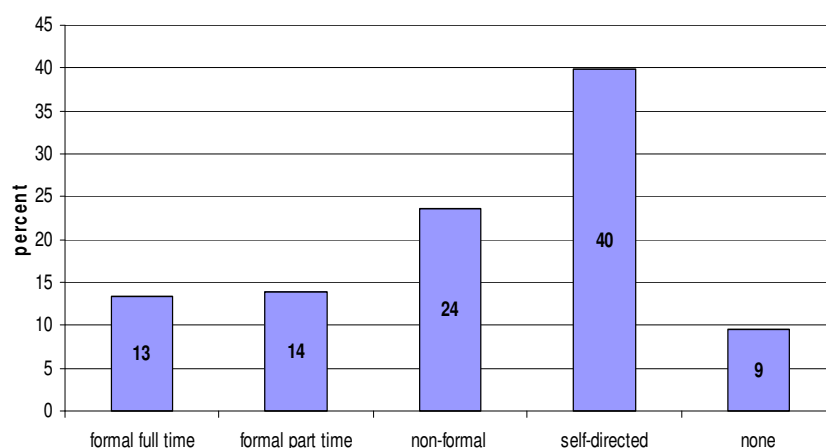


Figure 6. Proportions of adults who have participated in different kinds of education and training in the last 12 months.

Figure 6 is based on a simple analysis, whereby the numbers add to 100% by not double-counting people who participate in more than one type of upskilling.

Patterns of Participation in Upskilling

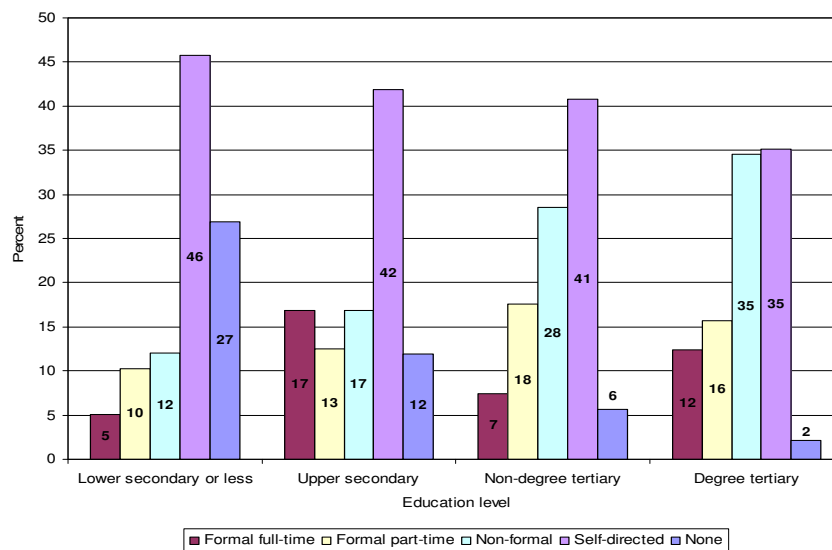


Figure 7. Comparison of the different patterns of participation in upskilling for people with different education levels.

Figure 7 shows the strikingly differing patterns in participation in upskilling. It shows patterns for five categories of participation in education and training, in the last 12 months, and aligns these to the four categories of education level. High proportions of people already with degrees participate in formal and non-formal education and training. Only a very small proportion of people with degrees do not participate at all. Many people at all education levels participate in self-directed upskilling.

Measured Numeracy Compared to Self-Assessed Numeracy

The next section discusses the relationship between directly measured numeracy skill, and self-assessed numeracy skill. The ALL survey *measured* people's numeracy skill directly, through completion of test items. It also asked people about their own *perception* of their numeracy skills. They were asked to indicate "agree" or "disagree" in relation to the statement "I am good with numbers and calculations."

We grouped *measured* skill into higher and low levels – levels 3/4/5 compared with levels 1/2. We also grouped *self-assessed* skill into higher and low levels – those who indicated "strongly agree" or "agree" to the statement "I am good with numbers and calculations", compared with those who indicated "disagree" or "strongly disagree" to that statement.

Table 3

Cross-tabulation of proportions of higher/low measured numeracy with higher/low self-assessed numeracy.

		Self-assessed numeracy		
		Higher	Low	Total
Measured numeracy	Higher	44	5	49
	Lower	37	14	51
	Total	81	19	100

Table 3 shows a strong mismatch between measured numeracy and people's self-assessment of their numeracy skills. In particular, 37% of people seem to overrate their numeracy abilities. However, it is probably too simplistic to see this result as an indication that a lot of people are just wrong about what they can do. It may mean their skills are relatively well-matched to the numerical activity they do.

Analysis of the New Zealand ALL data shows that the group of people who 'overrate' their numeracy skills are much more likely to participate in education and training than those who assess their numeracy skills as low and also have low measured skills. It looks like the people who 'overrate' form a group where raising skills could be productively directed – perhaps because they are already positively engaged with numerical activity, or have better numerical self-efficacy.

Summary

- New Zealand adults' average performance in literacy and numeracy is similar to that of Australia and Canada, better than the USA, but not quite as good as Canada.
- Greater literacy and numeracy skills are strongly associated with higher levels of education, and with being employed or a student, rather than unemployed.
- Women have relative strength in prose literacy and men have relative strength in numeracy.
- Adults with higher education levels tend to have higher numeracy skills.
- Results for each ALL skill domain show a strong age effect – 25-54 year olds had, on average, stronger skills compared to 16-24 year olds and 55-65 year olds.
- The overall document literacy skills of New Zealand European, Māori and Asian ethnic groups rose, while those of Pasifika remained relatively stable.
- People already with tertiary education participate most in further education and training.
- A strong mismatch exists between *measured* and *self-assessed* numeracy skills. In particular, a substantial proportion of people have low *measured* but high *self-assessed* numeracy skills.
- For more information see: www.educationcounts.govt.nz.

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Taste Your Future with ACE at NorthTec

Jane Scripps

NorthTec

“Now I can prove to me and others that I am worth something, can do something good – I’m not a no-hoper” – from a 2008 NorthTec ACE student and mental health patient. NorthTec changed 5000 peoples’ lives in 2008, through their participation in Adult Community Education. Fifty per cent of our Primary Industry full-time enrolments have come as a direct result of Taste ACE @ NorthTec.

Accessible and engaging options facilitate change.

NorthTec grapples with ways to deliver a wide range and of courses to students with a huge diversity of learning patterns, needs and aspirations, over geographic regions sparsely populated and minimally serviced. NorthTec’s communities in Northland and Rodney have very high Maori populations. Centralised employment opportunities require urban living or independent transport. Populations living rurally have limited resources and employment prospects; they face multiple barriers to change and improvement. For many generations, large numbers of school leavers have left formal education partially literate and numerate; further barriers to change and improvement and barriers to employment. These issues place constraints on how our community can respond to tertiary education and demands new ways of thinking about, describing and delivering adult education.

Adult Community Education opens minds to what is possible. Foundation Learning courses, Transition to Tertiary, and Community Computing, encompassing literacy and numeracy, are the tools that open access to a different future for second-chance learners, their families and their communities.

Introduction

Cyril Houle (Houle & Buskey ,1966), identified three categories of adult learner:

- Goal-oriented (pursuing identified objectives).
- Learning-oriented (learning for the love of it).
- Activity-oriented (learning for reasons unconnected with programme or content).

NorthTec’s experience is that this is too simple as people often have mixed motives for learning and motives tend to change over time. This paper will describe the changes that are taking place through the catalyst of ACE funding.

Languishing, Moving to Activated

The well established Tertiary Education Commission (TEC) fund of Adult and Community Education (ACE) had, for some years, been left languishing in the backwaters of pathway opportunities for Northlanders. Its multi-faceted potential was unrealised. In 2006, ACE at NorthTec received increased funding to support activity, in both Northland and rural Rodney. It formally acknowledged the “fourth sector, which focuses on that learning beyond structured formalised learning” (Benseman, 1996, pp. 9, 11). NorthTec reviewed its catalogue of approved courses against the TEC 5 priorities for ACE of:

Targeting learners whose initial learning was not successful, strengthening social cohesion, raising foundation skills, encouraging lifelong learning, strengthening communities by meeting identified community learning needs.

(TEC, 2001)

The review revealed that courses fell into three categories: those in need of updating; those now inappropriate to the fund's theme and criteria; and those in consistent use – the minority.

In 2008, Northland has a dispersed rural based economy. Other than the New Zealand Oil Refinery, timber mills, and infrastructure businesses, such as Golden Bay Cement, the economy is driven by the agricultural sector. The region's population is very dispersed, with only about a third of the population based in the Whangarei District. This is reflected in the large range of delivery sites NorthTec maintains separate from the traditional main campus (38% of students): five satellite campuses – Kaitia, Rawene, Kerikeri, Dargaville and Kaikohe (18%); a further 40% spread out over sites, such as the other Whangarei sites, Te Hana, marae, community halls, farms, forests and schools; with the remaining 4% of delivery provided extramurally or by distance. Challenges, such as poor infrastructure, higher than average unemployment levels and low educational attainment, combined with low numeracy, literacy, and digital literacy levels, all impact on the tertiary education needs of Tai Tokerau. The region faces gaining a 'critical mass' of people needing courses at level 4 and above.

Historically, the majority of school leavers have left school barely prepared to service the needs of life in the region. Most of the high schools are, and have always been, low decile, resulting in some parents sending their children out of the region for both secondary and tertiary education. NorthTec was initially established as a community college and used by the community for second-chance learning, or by those Northlanders needing to stay close to home. There was a sense of community, with NorthTec seen as a provider of education for those with low aspirations and restricted outreach ability.

Activated

In the last five years, the polytechnic has moved to a model of tertiary education provision that acknowledges the constraints its constituent population lives under. Now, more than 60% of NorthTec students are based away from the main campus in Whangarei, and an increasing number are enrolled as blended-delivery students. Consequently, the real constraints are now broadband provision, engagement desire and poor infrastructure. The ACE fund is perfectly placed to be least affected by each of these, due to not yet expanding to on-line delivery and its flexibility in both offerings and location.

Adult education was repositioned as a community economic development tool, a community engagement tool and a conduit to higher learning. The NorthTec Investment Plan states:

Social deprivation, low average incomes, difficulties with fees and a low level of qualifications in some northern communities combine to create an obligation on NorthTec to nurture and encourage students into a tertiary education pathway. We value the Adult Community Education courses we provide as an important pathway into tertiary education ... reducing unreasonable barriers to learning remains an ongoing focus for our academic planning. NorthTec

NorthTec (2007)

Today, with an independent brand that can interact with learning products or operate autonomously, NorthTec has shown that it understands the ability this brand has to impact on business and the lives of its community.

Northlanders are vulnerable to the politics of change. Traditionally, limited income sources, and a lack of the skills and knowledge to adjust, have resulted in many of the largely rural population being dependent on government benefits. Generational modification is slow, and perhaps slower than the technological opportunities now impacting on people's lives. This has led to many Northlanders sitting outside of the tertiary education system, disconnected from the ability and confidence to transform their lives. Adult Community Education is the best tool to try tertiary education for the first time ... or again.

The genesis for the change in ACE provision was community consultation to identify and customise a wide range of learning opportunities and to enable the development of learning experiences, in a manner designed to reduce barriers to a minimum. The response required that we deliver in the community, at a range of venues familiar to the learners, such as marae, community halls, farms and gardens. Our aim was to provide solutions, not only to meet our communities' expressed needs but also their revealed needs, which became visible through the consultation process and the resultant interpretation of the gathered responses. The tutors, who should also be acknowledged as community leaders, had to be familiar to the learners and understanding of their barriers to learning, demonstrating an ability to adapt to suit need. NorthTec is re-engaging with its ACE rural community.

NorthTec, in 2008 mode, is able to demonstrate more clearly than ever that tertiary education that begins with ACE in the community can lead on to certificate, diploma and degree programmes, and that these can also be based in the community. It is by consistently offering small and achievable steps to change that the polytechnic is engaging more deeply with the entire community.

ACE Opens Minds and Doors to Learning

The ACE horticultural programme, initially named 'Step Up and Grow', originated from the concern that specific students, enrolled on a Level 2 Horticulture course, could not be fairly assessed as their achievement was below that required by the unit standard. They had all suffered brain injury in various ways, which had reduced their opportunities to access training and employment prospects; additionally the challenge of assessment proved to be highly stressful. This exacerbated their negativity about learning and its consequences, curtailing the positive experiences of working outside in the fresh air.

Baby steps were needed (Knowles, 1980, pp. 57-59) and Step Up and Grow was developed to provide them. What was not realised, was how widespread the demand for introductory steps was, for the many members of the community starting out in a new area of interest. Today, up to 50% of full-time horticulture enrolments start out in Step Up and Grow. In 2009, a proposed new degree in early childhood education will also follow this model, stimulated by community need and request.

Positive experience is different for each group of students and cannot solely be

measured by comments on a piece of paper. In this accountable and systemised world, it is necessary to accept that some students are not yet ready or able to describe or quantify their experience in words. For some, it is by their readiness and willingness to attend and participate that they reveal their first step on the road to accessing higher levels of education. For example, a group of budding artists, with long term mental ill-health problems, are known to spend long hours in bed, virtually divorced from socialisation with the outside world. NorthTec has partnered with a trust to collect these people, sometimes from their beds, and take them into a creative environment. Over a period of weeks, these individuals have become ready for their transport, eagerly settling to their pastels and paper and have created works that transport them to a place of colour, tactile experience and inspiration; they have become a community of learners. “Over 62 percent of participants indicated they had experienced at least some improvement in their health” (Pricewaterhouse Coopers, 2008).

ACE funding has provided NorthTec with a conduit to outreach learning to a broader cross-section of its community – to its “farm-gate educators” (Bensemen, 2006, p. 7). The aspirations of these students, and those of their visionary leaders, are being matched with customised learning and extended through the broad range of opportunities the polytechnic is able to provide. It was recognised that initiatives need to integrate with community needs and this has led to the collation of a number of courses into a suite. As one example, ‘Raised Bed Gardens’ joined to ‘Autumn and Winter Vegetable Gardens’, ‘Pruning Your Fruit Trees’, then preserving through to ‘Jams and Jellies’, ‘Chutneys and Pickles’, joined at the hip by ‘Food Safety Unit Standards 167 and 20666’. This leads to ‘Creating a Small Business’ and supports small communities in their quest to establish growers’ markets.

Added value can be created by bringing parents and teenagers together in such projects and, in this respect, Secondary Tertiary Allied Resourcing (STAR) is an option. This facilitates two groups in the community – groups that, at times, find it hard to bridge the communication gap – having a common project on which to work and achieve tangible results. ‘Eat4Keeps’ and ‘Active Community Fitness’ courses now provide communities with further useful tools to address issues of concern – “Over 73 percent of respondents indicated an improvement in home/family life which is significant in reducing the effects of domestic violence” (PricewaterhouseCoopers, 2008).

The self-titled ‘Gangster Organics’ course – a raised bed garden course – gave the young men involved in it the opportunity to produce sound and ‘healthy’ results in a field outside of their growing gang culture, and they all thoroughly enjoyed themselves, whilst working alongside role models and mentors. This experience carries the sense of the Australian “Men’s Sheds” concept which specialises in the needs of men and their health and well being, centred around their men’s sheds (<http://www.mensheds.com.au/>).

Many of those who have a community involvement in ACE, find that there is a commitment and energy transfer from working with people who have a vision for their community that is nurturing to all stakeholders. NorthTec’s role is to share that goal, whilst working with such adult leaders to provide stepping stones and support towards the vision’s realisation. The institution’s decision to appoint an institution-wide ACE leader has produced a vertical and horizontal commitment to positive

outcomes. The sharing of knowledge, skill, vision and leadership strengthens relationships and opportunities for the people of Tai Tokerau.

Whilst meteoric growth in provision and response has involved systemic growth and development, consistent and polished communication has enabled all internal stakeholders to maintain a sense of involvement and to take pride in, and ownership of, the outstanding results.

Constraints on Provision

The “tyranny of numbers” (Bensemen, 2006, p. 5) in this enrolment economy imposes constraints on NorthTec’s ability to respond. It is becoming more common for community networkers to make contact with NorthTec in regard to new course development, based on an interest that is developing in the community. NorthTec can complement such growing awareness by responding with community advertising and attracting further participants; the course will often become self-perpetuating as a result. The ‘numbers game’ requires a more creative, consultative and collaborative approach – a mode of operation that sits very naturally with the ACE portfolio.

Fashion also plays a role in ACE provision. This is clearly seen in the meteoric growth in sustainable development ACE courses, including ‘Rainwater Harvesting’, ‘Autumn and Winter Vegetable Gardens’, ‘Urban Chooks’ and ‘Organic Beekeeping’. It is probable these courses will be sustainable for an extended period, as will be the ‘Revamp Your Old Clothes’ and ‘Whanau Maths’ courses.

It is NorthTec’s experience that some people do not see education as having anything to do with their lives and its issues – what could be termed their ‘real needs’ – they appear disconnected from learning. For these people to become involved, the courses must cater for something completely removed from the pressures of their daily lives – such as ‘Asian Cuisine’. NorthTec’s ACE students are from across the spectrum – from those at this point, to those who see education as something they become involved in that assists them in grappling with life’s issues – and many cross the divide. To ensure NorthTec’s provision remains responsive, it is necessary to be aware of change internationally and nationally, and to be aware of how such movement complements NorthTec’s core business of student achievement at NZQA (New Zealand Qualification Authority) Levels 1-7 through the awarding of certificates, diplomas and degrees.

The NorthTec Investment Plan not only sets goals that increase the institution’s outcome commitment, it also introduces new opportunities to Northlanders using ACE. Each ACE course is now mapped to show the steps through to higher learning options, and visual representations of these pathways are being included with all ACE course material. A Certificate in Personal Interest and a Certificate in Proficiency are both available and may be sought by ACE students; students completing these courses will be able to demonstrate preparedness for higher learning to their future tertiary providers. NorthTec’s significant information technology investment and partnerships have resulted in the institution-wide implementation of blended learning delivery, which is proving very successful. By offering blended learning, the use of NorthTec learning centres, and collaboration with community groups, provision into previously poorly serviced parts of Northland, for literacy, numeracy and information technology literacy, will be accessible for any adult.

The 1996 International Adult Literacy Survey (IALS) (Walker, Udy, & Pole, 1996) formally identified the considerable numbers of New Zealanders with literacy and numeracy difficulties. TEC, in 2008, (TEC, 2008) announced further funding that focuses on wider provision and support to the re-acknowledged sector of literacy, numeracy and language. ACE-funded providers will be required to demonstrate their response. Recent findings in the Pricewaterhouse Coopers' report (2008) point out that:

Fewer than 20 percent of learners surveyed were directly involved in numeracy or literacy programmes, yet 20 percent recognised an improvement in their literacy and numerical skills, suggesting that these skills have developed as an additional indirect benefit from participation in ACE programmes, courses and activities.

NorthTec's ACE involvement begins with making literacy, numeracy and language a visible constituent of its courses. It will affirm ACE students present levels of literacy and numeracy through soft identification of parts of the course that include the use of these tools, in such courses as 'Meals Without Sweat', 'Eat for Keeps', 'Pattern Drafting and Design' and 'Women – Fix Your Cars!'.

ACE is Flourishing

NorthTec is keenly aware its community uses ACE for many reasons (Houle, 1966). For any student, it is hoped that, due to their ACE experience, there will be an increase in their level of confidence as they take future steps in directions that attract them. There is growing evidence this is working very well in two programme areas; success is now sought across the board. NorthTec is keen to convert ACE success, where appropriate, into longer term learning. Systems have been adapted to facilitate this, with enquiry and enrolment software adjusted to complement course acceptance interviews, thus gathering data about students' previous ACE involvement. Student Success Services are able to provide a continuity of service to those accepted to help maintain and build upon ACE success.

The implementation of the Taste your Future with ACE model has resulted in ideological and systemic changes to business at NorthTec. A marketing plan and tools have been created and held up as examples of best practice internally. NorthTec, ITPQ and TEC quality management systems have been integrated and gained a 'good practice' grading in the 2008 ITPQ Audit Report.

The role of networking and community consultation, as associated with ACE, has been seen to positively change NorthTec's relationship with its community. Community engagement, as an overt and acknowledged activity, had languished along with the ACE fund; now, not only is it a natural part of ACE development, it has also led to better relationships between providers and the people of Northland and rural Rodney. New business for the institution has emerged and a continual underpinning of NorthTec's more positive position in Northland is being experienced.

Blended learning delivery for ACE at NorthTec is a development area and one viewed with caution for ACE courses. The aforementioned constraints to learning: of broadband provision, engagement desire and poor infrastructure, mean that the

implementation and use of information technology into such courses is being considered prudently. This is not only due to the basis on which many people attend ACE courses, relating to the five ACE priorities, it also acknowledges that switching back on to learning is a delicate and, at times unstable, process; minor barriers can very easily lead to involvement withdrawal, with styles of learning that are too distant from the known proving to be too big a step. There is feedback that completion rates are poor for a range of reasons, including not only the three constraints mentioned, but also the renewed isolation and sense of frustration that are implicit for some in blended learning. Early signs are that delivery of ACE using this style will be limited and very carefully managed to targeted groups. The costs of developing on-line ACE courses will be a fiscal constraint, with clear and positive outcomes for both student and provider a prerequisite.

Crystal Ball Gazing

As I complete this paper, the impact of globalisation, particularly in the financial sector, is being keenly felt as “turmoil” (Radio New Zealand, 2008) continues; the nation’s books have been opened and an election will take place in weeks. Recently established groups, such as ‘Transition Towns’, and the sense of hunkering down may result in serious community-wide reflection about the skills and knowledge needed to weather the much reported ‘economic downturn’. Each of these events will impact on the lives of New Zealanders. ACE funding through NorthTec has the opportunity to support its rural-based community, in this time of uncertainty and change, by providing a range of learning and community sharing experiences. Fortunately, it has now positioned itself, both internally and externally, to be able to share its model and contribute to community growth and sustainability. The funding constraints and changes mean that ACE is very susceptible to the whim of political decisions. Coordination by providers in Tai Tokerau will need to improve to minimise unnecessary duplication, and this has begun through sharing at ACE Networks, but there is room for greater sharing and refinement. It will become increasingly important for ACE to demonstrate its worth and to position itself as a vital learning environment, producing capability and return on investment.

The Price Waterhouse Coopers’ report concludes:

When compared to other community-based activities, ACE is likely to have one of the highest added values in economic terms, as it is largely focused on improving people's productive lives through learning. Additionally, the benefits of enhanced learning are likely to have implication in all areas of an individual's life, whether as employees, parents, or members of the community ... ACE facilitates the development of human capital. PricewaterhouseCoopers (2008)

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The TEC Professional Development Clusters in ITPs: Evaluation Findings

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Tertiary Education Commission

In 2008, as part of a national strategy to upskill the New Zealand workforce, the Tertiary Education Commission (TEC) funded a professional development initiative within 11 institutes of technology and polytechnics (ITPs). The aim was to work with tutors and managers responsible for certificate-level programmes to support their understanding of how to embed the teaching of literacy and numeracy in their programmes and policies. The project brought together approximately 25 tutors and managers from across each of 11 ITPs in 'clusters' or communities of learning. Cluster members were expected to commit 10 days per half-year, some of which was spent in workshops and some of which was spent developing resources and reflecting on practice. Tutors were expected to share their reflections and take responsibility for sharing their learning within their different disciplines. The evaluation of this professional development aimed to identify the impacts of the initiative on tutors, students, and the institution, and also to determine whether the initiative was effective in raising literacy and numeracy skills of students.

This paper introduces the TEC professional development initiative, its aims and scope, and the results of the evaluation, six months into the year-long project. The evaluation is based upon work team reports, stories of "most significant change" by tutors and managers and an appropriate reading assessment tool. The results are important for future planning in organisations that are committed to raising levels of literacy and numeracy and providing opportunities for students to advance to higher levels of learning.

Origins of the Initiative: Moving Literacy from Margins to Core of Tertiary Education

The 2008 New Zealand government professional development initiative, to embed literacy capability across tertiary institutions, had its origins in the shockwaves generated by the 1996 International Adult Literacy Survey. This OECD survey found that the literacy and numeracy skills of over 40 per cent of New Zealand adults aged 16 to 65 were inadequate to meet the demands of daily and work life (OECD & Statistics Canada, 1997). In response, from 2001 the government launched a range of strategies focusing on raising the literacy and numeracy or 'foundation' skills of adults. The "More Than Words" strategy identified foundation education ('developmental' education in the USA, 'access' education in Europe) as a component of the tertiary education sector, and advocated increasing the amount and quality of its provision, and improving professional development for foundation educators (Ministry of Education, 2001). The "Learning for Living" project, established in 2004, initiated a wide ranging inter-agency work programme, designed to inform and support the practice of foundation educators through a number of measures, including research, the provision of improved diagnostic and teaching tools, and a variety of professional development initiatives based on these. In 2007, the Tertiary Education Strategy prioritised the development of "strong foundation skills" as an essential contribution of tertiary education and, in particular, a distinctive contribution of institutes of technology and polytechnics, or "ITPs" (Ministry of Education, 2007).

In one decade, literacy and numeracy education thus moved steadily from the margins to a core activity of tertiary education, included in the highest levels of

tertiary education policy in New Zealand. As one consequence of this shift, from early 2008 the government's Tertiary Education Commission (TEC) funded a year-long, comprehensive professional development initiative, aimed at enabling certificate-level educators in ITPs to embed literacy and numeracy in all their programmes. This paper outlines the aims and scope of this initiative and reports on its progress midway.

The TEC Approach to Professional Development for Tertiary Educators

The TEC made significant funding available for professional development in literacy and numeracy for staff from New Zealand's 21 ITPs in 2008. The approach taken was underpinned by research evidence indicating desirable objectives, models and content for this professional development.

Research evidence for approach

A comprehensive literature review on effective foundation teaching, together with an observational study of teachers and a mapping of the foundation sector in New Zealand, was undertaken from 2003, under the auspices of the Learning for Living project, in addition to a series of exploratory research studies centred on selected foundation education providers. These confirmed the need for professional development and provided direction for it (Benseman et al, 2005a, 2005b, 2005c). Although the majority of educators had some form of tertiary qualification, they appeared to lack generic teaching skills and there was a low incidence of focused literacy and numeracy teaching in their classrooms. This was especially marked with regard to the teaching of reading skills.

Research undertaken in the United Kingdom also provided direction for the objectives and content of the professional development. A wide-ranging study of vocational programmes showed "embedding" as the most effective way for learners to achieve literacy and numeracy gain (NRDC, 2006). An embedded approach teaches these competencies within the course content, not in separate unrelated blocks of learning; it includes explicit teaching and assessment of literacy and numeracy. To be effective, this approach requires a 'whole of organisation' effort, supported strongly by all levels of management and necessitates changes in tutor attitude and practice, including the incorporation of team work and joint planning by subject and learning specialists. As such, it has organisational implications for learner recruitment and placement, course design, staffing, development of internal expertise, and resources.

Professional development literature, including a New Zealand study of the impact of professional development on student outcomes, further informed and provided direction for the cluster group model adopted (see Heinrich, 2007; Prebble et al., 2004).

A cluster model for professional development

The cluster group model of professional development for tutors is strongly supported by recent research as a way of facilitating uptake of improved practices, such as the use of diagnostic and teaching tools. This model moves away from short training courses, or one-off workshops, towards ongoing in situ training in work groups, intensive staff development programmes, involving shared knowledge,

reflection, exposure to different and sometimes more appropriate models, refinement and transformation of practice and peer mentoring (Prebble et al, 2004).

Drawing on this model, from 2005 to 2007 the Ministry of Education funded practitioners to participate in exhaustively evaluated professional development groups or “clusters”, composed of representatives of the range of tertiary education providers. In 2006, two “internal” clusters, based within single institutions were piloted, composed of representatives of the range of each institution’s subject disciplines. Building on the success of these initiatives, in early 2008 the TEC offered 11 ITPs the opportunity to participate in internal clusters, each composed of 25 staff representing the range of subject disciplines within their ITP; a further six ITPs took up this offer in mid 2008. Clusters committed to a focus on either literacy or numeracy over a period of twelve months and were facilitated by specialist professional developers (“developers”). Because of the well documented role of managers in facilitating any kind of organisational change, including changes to teaching practice, participants included managers as well as tutors. Cluster participants formed subject-discipline work teams, of three to six tutors and managers, who worked together to contextualise the professional development to their area. Over the 12 months, ITPs received funding for a total of 20 days per tutor and 10 days per manager to undertake this work.

Professional development content: embedding literacy and numeracy

The aim of the professional development programme was to raise the literacy and numeracy levels of learners by enhancing the teaching skills of tutors in literacy and numeracy. Tutors and managers were expected to embed literacy or numeracy into course and programme design, delivery and assessment; submit reports and session plans detailing this, and establish action plans to disseminate implementation of this work. It was anticipated that learners would show improvement in literacy or numeracy and be able to discuss, apply and transfer the taught knowledge and strategies to relevant contexts of learning and work.

In the first six months, developers introduced cluster participants to the concept of embedding literacy or numeracy in terms of the newly developed learning progressions, a coherent teaching framework consisting of standardised progressions describing the key learning steps taken by adults in literacy and numeracy (Tertiary Education Commission, 2006, 2008). They also introduced participants to accompanying publications detailing suggestions for diagnostic and teaching activities based on the progressions. In a series of up to six workshops, participants learned to use the progressions to assess both learners and the demands of their course material, and to inform their teaching activities. In between workshops, participants were funded to trial innovations to their practice and resources and reflect on these in meetings of their subject-discipline work teams.

For the second six months, the focus moved to embedding literacy or numeracy, through sharing the learning organisationally and supporting further development, employing such strategies as peer observation and team teaching. This was facilitated through further cluster workshops and visits by developers to individual work teams.

Evaluating the cluster professional development initiative

The evaluation of the 2008 cluster professional development initiative was carried out by a government evaluator, and aimed to firstly, identify impacts and secondly, ascertain the effectiveness of the initiative to raise learner achievement and literacy or numeracy skills.

To meet the first objective, the evaluation gathered data from a range of regular reports, from narratives as specified in the “Most Significant Change” (MSC) technique (Davies & Dart, 2004), and from an assessment tool in either reading or numeracy. Developers provided monthly reports, developers and participants provided post-workshop evaluations, and cluster work teams provided bi-monthly reports. The MSC technique required each cluster developer and participant to write two 400-word narratives, one in July and one in November, describing the most significant change observed as a result of involvement in the cluster: developers described change in tutors, tutors described change in learners, and managers described change in their institutions. Panels selected which narratives to forward to the evaluator for analysis, and provided a rationale for their choices. It was made clear to participants that the data gathered from reports and MSC narratives was intended to be used for multiple purposes, including ITPs’ own research projects, reports, newsletters and other communications, as well as the government evaluation. The purpose of this was to facilitate the dissemination of the embedding message as widely as possible.

To meet the second objective, of assessing the degree of learner gain, the evaluation collected baseline learner assessments in July and was to collect a final round of assessment data in November. Professional development literature strongly supports improved student learning as the ultimate objective of teacher professional development (for example Guskey, 2000, cited in Heinrich, 2007). Ironically, a literature review undertaken as part of a New Zealand study, of the impact of professional development of teachers on students, noted that “virtually no studies have even attempted to measure the impact of academic development programmes for teachers on the learning outcomes of their students”, (Prebble et al, 2004, p. 25). Despite the problematic nature of correlating improvements in student learning with professional development of teachers, the evaluation aimed to identify impacts of the initiative on learners as well as on tutors and the institution.

Interim results, in August 2008, were based on the reports submitted from February to June, and on the narratives of most significant change selected in July; results of the assessment tools could not be measured until December 2008.

Initial findings – uncomfortable early stages

Six months into the year-long initiative, the evaluator was able to report encouraging results in an informal email to project leaders:

I can tell you right now the evaluation is going to be positive. This is a good thing you all have got going, especially the cluster meetings where I think the buy-in, mainly from peers, begins (Kumekawa, G. email, 4 August, 2008).

This was not to say, however, that the findings were uniformly positive. The early stages of implementing the initiative were uncomfortable for participants in a number of ways.

Findings from reports

Analysis of bi-monthly work team reports, workshop evaluations and monthly developer reports, revealed issues for both tutors and managers around motivation to participate in the training, or “buy-in”, as well as around the training itself. Reports also indicated that developers were quick to become aware of these issues and addressed them in a variety of ways (Kumekawa, 2008).

Significant commitment of time and resources was required of cluster participants, who were expected to attend workshops and team meetings and carry out between-workshop tasks reflecting on and trialling new activities. Despite support in principle for the initiative at top management level of the ITPs, and the provision of government funding for release time, in the early stages some tutors and managers struggled to accept the need for this particular form of training: they questioned whether it was their role to teach literacy and numeracy in addition to their subject. In addition, the training challenged a significant number of participants’ own literacy and numeracy skills. The concepts underpinning the learning progressions, and the language used in them, were not easy for participants with no prior training in such frameworks. Furthermore, most participants reported difficulties around finding time to meet the requirements of the cluster.

Reports showed that such issues were addressed by developers in a variety of ways, and with some success, as they became aware of them. Developers provided further explanations of the strategic significance and objectives of the initiative. They took time to explain these to individual managers and tutors, as well as to the teams and the cluster as a whole, and sought to raise issues of relief time with senior managers. In addition, they tailored their presentations to the skill levels of participants and aimed to be explicit in modelling the strategies for teaching and learning they expected participants to adopt. A particularly effective way that developers used to gain acceptance of the value of the work was by dedicating workshop time for participants to share practical, contextualised applications of their learning with their peers. The varied efforts of developers proved motivating for participants and the following observation became typical of many:

All tutors are finding the workload from the clusters is significant, and it is not always easy to find relievers to cover for classes. However, all tutors are finding the time to keep up with the readings, the tasks and the planning. (Literacy cluster work team report, July 2008)

Findings from MSC narratives

Not surprisingly, MSC narratives at the six-month point, from both developers and managers, reflected the uncomfortable early stages revealed in the reports, with clusters cautious about the new learning. Typically, participants only understood the relevance and usefulness of the professional development workshops as they trialled the ideas and approaches, and developed more familiarity with the progressions and the literacy and numeracy-related resources, strategies and assessments.

One developer's narrative characterised cluster participants' attitudes to the professional development programme as a "slow unfolding ... a gradual rise in enthusiasm overcoming initial reluctance as more (participants) attempt(ed) activities", exemplified in the experience of one particular tutor, who:

... decided to unpack an important, historically difficult assessment, by using (the new) approach. This involved an investment of two and a half hours of activities. This investment reaped an amazing 100 per cent pass rate. The tutor was, of course, really pleased, but also, on reflection, somewhat horrified at the implications of their past practice. Literacy developer

Managers' narratives reflected this gradual increase of 'buy-in', where they began by thinking the professional development was not relevant but became aware of its usefulness and value, as they saw the results of thinking about the appropriate level of course material and the positive impact on learners of selecting appropriate texts. A manager in a numeracy cluster observed an "attitude shift" as participants realised that "there (were) more opportunities to teach numeracy in the content, than previously realised" (Bay of Plenty Polytechnic manager). Manager buy-in was also aided by the professional development workshops being "fun and motivating, and ... safe for learning" (CPIT manager), coupled with the realisation that changes tutors were making as a result of the professional development resulted in positive changes in learners: "learners are more engaged, have more interest in their studies, and have more confidence" (Unitec manager).

Further Initial Findings – an Emerging Familiar Pattern

After six of the 12 months, the reports and MSC narratives revealed evidence that significant ground work was in place for literacy and numeracy to be embedded into institutional practices. A familiar pattern was emerging: as noted in the UK report on successful implementation of embedding (NRDC, 2006), there was evidence from the clusters of changes in tutor attitudes and practice, including implementation of team work of various kinds; there also evidence of changes at an institutional level indicating increasing organisational support. Furthermore, the signs were promising that these changes would be followed by significant gains in learner achievement. While learner gain could not be formally measured until the end of the twelve months, tutors and managers in all ITPs participating reported positive changes in learners' attitude, interaction in class and competence.

Changes in tutor attitudes and practice

Although tutors were asked to write about changes in learners, and they did, at the six-month point, their MSC narratives indicated that tutors found it more natural to write about changes in their own practice as a result of the professional development. Over half of the tutors wrote about changes in themselves, rather than in their learners. However, these self-reported changes were reflected in the range of reports and in the MSC narratives from developers and managers. Significant changes were revealed in tutors' attitudes to learners and to literacy or numeracy, and these resulted in changes to their teaching practice.

Tutor attitude to learners. Both managers and tutors reported that the professional development had increased their awareness of learner needs, making them less ready to entertain assumptions about learners. Tutors were faster both to identify, and to address, confusion and underlying defeatist attitudes in their learners, and were more proactive in, and capable of, engaging and assisting learners using appropriate and relevant situation-derived opportunities to teach to identified needs. Managers reported realising that the language used in teaching was frequently not really understood by learners, and that it was the institution's responsibility to address this lack of understanding:

We now see that in certain circumstances we have used poor language and that ... it is our responsibility ... First we must change ourselves before we can effect change in our students. NMIT manager

Developers introduced clusters to learner surveys that were designed to uncover attitudes to reading, writing and numeracy, and work teams consistently reported on the value of these for informing teaching. Typically, one work team in a literacy cluster reported using the attitude to reading survey in a course seen as the most difficult for the first-year students to understand:

The students talk about (the survey) and give feedback in small groups. This allows lecturers to gain instant feedback, as analysing over 60 surveys takes time. From the feedback given, the main things the students want is strategies to identify the key words and strategies to make sense of difficult concepts. Literacy cluster work team

Developers also introduced clusters to strategies for approaching literacy and numeracy, which were named in order to encourage participants to name them in their own teaching, thus raising learners' awareness of their own approaches to literacy and numeracy. This in turn raised tutors' awareness of strategies used by their learners. Developers also taught clusters to use the learning progressions to identify the literacy and numeracy demands of courses, which raised participants' awareness of their course materials and led to changes in tutor practice:

I have steadily worked against the assumption that students understand what is being said. (As I teach) words are freely decoded and meanings provided without the need for students to ask for meaning. I am able to do this as, through learning about 'the learning progressions', I have become more aware of precisely which ... specialised vocabulary and irregular words students may not yet have experienced. Unitec tutor

These self-reports were reflected in the MSC narratives by developers, on changes in tutors, which noted that tutors now realised more about their learners, via their own questioning, causing them to take a more learner-centred view. This caused tutors to try new tasks and activities to engage learners. Particularly in numeracy, tutors became more aware of the benefits of strategies like questioning and discussion to develop understanding, rather than just teaching rules, and

consequently took more opportunities to embed numeracy.

Tutor attitude to literacy or numeracy. Narratives by tutors, developers and managers showed that the professional development uncovered, and was able to address, cluster tutors' own literacy and numeracy needs, which led to greater confidence and competence in helping learners. This was particularly noted by those participating in numeracy clusters:

Being given the tools and resources improved tutors' own numeracy ability.
Weltec manager

and:

(I gained) more confidence using simple visual and hands-on aids, and ...
(observing the) positive impact on learners increased (my) awareness of the
necessity to teach basic maths skills. Wintec tutor

Tutors in literacy clusters gained confidence in teaching literacy through
learning to use the progressions:

The progressions have given me the confidence to follow certain paths with
(my students) . . . I struggled to understand ... the progressions at first, but
have found them to be valuable tools. EIT tutor

Tutor practice. Managers, developers and tutors reported that changes in tutors' attitudes led directly to changes in teaching practice. Tutors became more reflective and aware of their own practice, more open to change in their teaching methods and style. Their practice improved as they made use of the progressions to modify resources and assess learners, and to identify opportunities to teach literacy or numeracy, at the same time as they taught subject content. As one tutor explained, "I used to be a cook who taught, now I am a teacher who cooks" (Developer email, 15 August 2008).

Tutors reported becoming aware of the importance of taking the time to teach the "basics", sacrificing subject content if necessary:

One of the most important things that I have learned from other tutors in the
cluster ... is that the time spent going back to the basics with students is time
gained many times over with them by the end of the course as, even though it
may take longer explaining things initially to the students, this time is well and
truly made up for by them actually learning how to do things! CPIT tutor

Team work of various kinds. Tutors, developers and managers, noted that tutors developed different ways of working together, ranging from simply more peer discussion and networking, to openness to change from seeing the success of others, to meeting other tutors, to improved teaching strategies and written materials. Tutors were appreciating and drawing on each other's specialist skills and, in some cases, were also viewing each other's lesson plans and sitting in each other's classes:

All the lecturers within my department are talking about how they teach, what student-centred learning is, sharing information and lesson plans and thinking about how they have previously given the information to the students and how they can change to best suit the learners' needs. The lecturers are now in each other's lessons and sharing multi-media tools and techniques. Otago Polytechnic manager

These forms of team work were leading naturally to initiatives of dissemination wider than the cluster:

Tutors are not only talking to each other about what they are learning through this professional development but they are talking to their teams and other academic staff and this has created opportunities for the informal dissemination of the professional development across the institute. Weltec manager

Changes at an institutional level

Managers' narratives about the impact on their institutions showed the cluster work had brought about greater institutional awareness of literacy and higher visibility:

The cluster has brought literacy issues in from the cold and onto centre stage. As a result, I have seen a new enthusiasm for teaching and a willingness to amend courses and class work to make them more accessible and more learner-focussed. Otago Polytechnic manager

Managers noted increasing recognition that learner needs were not being met, and consequent changes were initiated at classroom, management and policy level. In one ITP, management re-arranged rooms to facilitate student peer learning; in another, management was allowing teaching staff professional development focused on adult literacy; in yet another, external recognition and awards had been received for cluster participants' approach to teaching literacy. Managers noted that literacy and numeracy were being incorporated into an increasing range of course material; teaching and learning activities' workshop content was being spread to non-cluster staff and the concept of embedding was being shared. At policy level, ITPs were also undertaking more literacy and numeracy-related initiatives. These included development work, grant applications, projects, such as the development of a resource bank of materials and activities for teaching numeracy, and the implementation of an on-line learning package giving students access to videos relevant to learning. Across all ITPs, it appeared that energy levels among staff to embed literacy and numeracy were being raised.

Changes in learners

Tutors' narratives reported positive changes in learners' attitude, interaction in class and, most significantly for the ultimate aims of the initiative, in their competence.

Learner attitude. Tutors attributed increases in learners' confidence, self esteem and pride, and decreases in anxiety and fear, to their involvement in the cluster. Numeracy tutors, in particular, noted that learners' negative attitudes, towards learning, maths, and completing courses, changed as they overcame personal barriers and reluctance and experienced the pleasure of successful attempts, realising they did have prior knowledge to draw on:

On her first day (my student) was very shy and apologetic about how poor her math skills were and told me several times that maybe she did not know enough to be doing this course. As we worked our way through the numeracy assessment we came to $\frac{1}{4}$ plus $\frac{1}{8}$. She could not give me an answer until I asked her to visualise 2 pizzas and how she would divide the remaining food amongst her moko. So she drew pictures of the pizzas and worked the answer out. She beamed and continued the assessment. Several more times she described how she used other strategies in a practical every day situation. She made comments like, "I didn't know I knew so much", "Who would have guessed I knew so much." The whole numeracy assessment had become a huge self-esteem builder for her. She finished by saying she probably could do this course. Wintec tutor

Learner interaction in class. Tutors observed that learners showed greater engagement, contribution, interest and participation in class. Learners questioned more and their behaviour improved, with less 'acting out'. Tutors attributed this to the changes in their practice, in particular, their use of diagnostic assessment and of activities focused on teaching and learning literacy and numeracy:

Where once my teaching of maths (which is definitely not my forte) would have left students with that glazed and bewildered look upon their faces, it is now an interactive and engaging time. Students and I are learning from one another and exploring numeracy in an entirely different fashion. Students are much more forthcoming now at contributing to a discussion on a contextual topic that includes numeracy as opposed to putting themselves on the line in a maths' lesson environment ... they now share information and experiences openly and more confidently. UCOL tutor

Tutors saw the activities modelled by developers as effective ways to engage learners:

The activities are not 'flash' or 'professional' but they add variety to lessons, are fun and often student-generated. This gives more scope for flexibility and extension work when necessary. Not all activities are successful (but) the students are open and receptive to these as well and we can adapt the activities when needed. Students have more stake in the learning and we are working as a more cohesive team. They are prepared to be active and involved in every task and are less likely to engage in superficial reading of material as they have been provided with the tools to help decipher technical language more effectively, thus getting deeper and more complete understanding. NMIT

tutor

Learner competence. Although learner gains in competence cannot be assessed until the end of the twelve-month period, tutor narratives indicated that such gains may be expected:

Since I worked to decode words and explain meaning more rigorously during class, the number of students staying after class to receive clarification on lecture points has reduced significantly. In addition, when the meaning of words is not readily provided students feel more able to ask for meaning to be clarified, possibly because it is seen as a pivotal part of understanding and no longer a point of assumption by the lecturer. Unitec tutor

Tutors reported learners were more able to draw on their prior knowledge, complete more difficult work and handle complex course material. They appeared less confused, less threatened by course content and better able to remember what the tutor did and to have greater understanding of the content.

Embedding Literacy and Numeracy Capability Across Institutions: No Going Back

As foundation education has moved, over the last decade, from the margins to a core activity of tertiary education, the New Zealand government has made a substantial investment in professional development for literacy and numeracy educators. Initial findings suggested that the cluster model of professional development employed by the TEC, grounded in research and focused on learner gain through embedding, resulted in significant positive changes in participating tutors, managers, institutions and, most critically, learners.

Midway through the initiative, it appeared that improving the knowledge and skills of teachers in literacy and numeracy, through professional development clusters, was resulting in the kind of changes that characterise successful embedding and which can therefore be reasonably expected to bring about learner gain. Despite uncomfortable early stages, there was strong evidence that the developers appeared to be effective in their workshops and that the 'whole of institution' approach, as seen in the team meetings and manager involvement, seemed to have effectively raised awareness and improved practice. After six months, there were positive changes in tutors' attitudes to learners, and to literacy and/or numeracy, as well as in their practice. Team work of various kinds was occurring and there was growing organisational support for embedding. Tutors, who initially could not see the point of including literacy and numeracy learning content in lecture situations, higher degree level courses, such as law, or in short courses of two weeks duration, still wrote narratives of positive impact on learners and their own practice. Tutors reported positive changes in learners' attitudes, interaction in class and competence.

It is not unreasonable to suggest that the evaluation up to this point showed that it is possible to raise standards through embedding literacy capability across institutions. Insights gained so far could be applied in the ongoing delivery of professional development based on the learning progressions. As one cluster manager put it:

I think all of us who are part of this initiative now realise it is crucial for the future and that it is likely that we have not been meeting the needs of all of our learners. Once you have this knowledge there is no going back. NMIT manager

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Appendix


Programme Details

Time	Session	Presenter	Chair
8.30-9.00	Registration	Foyer Level 2	Tea and Coffee
9.00-9.15	Mihi Whakatau Lecture Theatre		
9.15-9.40	Welcome Lecture Theatre N222	Hon Steve Chadwick MP for Rotorua Minister of Conservation Minister of Women's Affairs Associate Minister of Health	Rae Trewartha Unitec
9.40-10.45	Keynote Lecture Theatre N222	Dr L Dee Fink <i>The Joy and Responsibility of Teaching Well</i>  Dr Fink will address four issues: WHAT we teach, HOW we teach, how we "GEAR UP" to teach, and WHO we are	Kirk Sargent MIT
10.45-11.05	Morning Tea Cafeteria N100		
11.05-12.00	Papers/workshops: Session 1	Room N201 I Am: Self Portraiture in Printmaking that Accelerates the Learning and Confidence of Students in a Foundation Art and Design Programme <i>Leigh Anderton, Certificate of Art and Design, Whanganui UCOL</i>	Rob Hooper Unitec
		Room N203 Perception of Skills Needed for Future Study by Bridging Programme Students <i>Ian Wilson, Manukau Institute of Technology</i>	Lyndsay Blue UoA
		Room N222 Is Lecture and Tutorial Attendance Important for Young Enabling Students: A Preliminary Analysis? <i>Dr David Powter, English Language and Foundation Studies Centre, Ourimbah Campus, University of Newcastle, Australia</i>	Rae Trewartha Unitec

		Room N230 Reducing the Barriers on Learning Pathways: Transition in and Through Tertiary Study <i>Catherine Walker, Foundation Studies, Health and Environmental Sciences, AUT University</i>	Moira Statham UoA
		Room N309 Ka Whangaia, Ka Tupu, Ka Puawai: Kia Kotahi Te Takahi Whakamua <i>Catherine Dickey, Bert Henry, Leafa Luatua, Carolyn Mayo, Catherine Russell</i> <i>Manukau Insitute of Technology</i>	Warwick Hill Waiariki
12.05-1.00	Papers/workshops: <i>Session 2</i>	Room N201 The Tertiary Education Commission Professional Development Clusters in Institutes of Technology and Polytechnics: Evaluation Findings <i>Jane Terrell, Project Manager, Professional Development, Tertiary Education Commission</i>	Bev Pointon MIT
		Room N230 Weaving Knowledge – Deepening Learning <i>Moira-Clare Donovan, University Study Skills, Dr Peter Howland, University Preparation</i> <i>Victoria University of Wellington</i>	Margie Matthews NorthTec
		Room N309 Taste Your Future with ACE @ NorthTec <i>Jane Scripps, Adult and Community Education and Short Courses Coordinator, NorthTec</i>	Shirley Porter BOPP
		Room N201 Seeing Things Differently: Issues for Mainland Chinese Students Desirous of Studying in our Universities <i>Julie Hardie, University of Canterbury</i>	Fololi Lologa-Iosua MIT
		Room N222 Tui, Tui, Tuia : Weaving the Strands of Ihi and Empiricism <i>Stuart Norton, Christchurch Polytechnic Institute of Technology</i>	Karen Davis VUW
1.00-1.55	Lunch Cafeteria N100		
2.00-3.00	Workshop Lecture Theatre N222	Dr L Dee Fink Team-Based Learning	Rae Trewartha Unitec

3.00-3.20	Afternoon Tea Cafeteria N100		
3.25-4.20	Papers/workshops: <i>Session 3</i>	Room N203 Facilitating Transformation: More than Academia <i>Catherine Walker, Foundation Studies, Health and Environmental Sciences, AUT University</i>	Trevor Barnard MIT
		Room N201 Three Different Teaching Approaches in Bridging Mathematics: Affective Changes and Students' Reactions <i>Barbara Miller-Reilly, Department of Mathematics, University of Auckland</i>	Glen Bryant Unitec
		Room N309 Down but Not Out <i>Christine Clark, Corporate Academy Group</i>	Maria Meredith UoA
		Room N222 Learner Success, Retention and Governmentality in Foundation Learning: A Snapshot from Research <i>Peter Isaacs, Linda Leach, Nick Zepke, Massey University</i>	Alistair Shaw VUW
		Room N230 On-line Learning – Does it Work for Students in a Bridging Programme? <i>Nikki Truman, Kaye Anderson, Western Institute of Technology</i>	Hazel Owen Unitec
4.30-5.30	AGM with drinks and nibbles Room		Rae Trewartha
7.00	Dinner Distinction Hotel, 390 Fenton Street		David Dell Guest Entertainer

Friday 10 October

Time	Session	Presenter	Chair
9.00-9.30	Registration	Foyer Level 2	Tea and Coffee
9.30-10.30	Keynote Lecture Theatre N222	<p>Professor Eleanor Ramsay <i>Bridging Education and Australian Higher Education Equity</i></p>  <p>Professor Ramsay will discuss equity in Australian higher education, with a focus on bridging education, and the relevance of developments in this area for bridging education in New Zealand.</p>	Alex McKegg Unitec
10.30-10.50		Morning Tea Cafeteria N100	
10.50-11.45	Papers/workshops: Session 4	<p>Room N201 The University of Auckland Tertiary Foundation Certificate Programme: What it is and how we Teach it, Illustrated with Practical Activities in Several Subject Areas <i>Stephanie Wyatt, Lyndsay Blue, John Leckie, Nina Nola, Sheena Parnell, Moira Statham, Tertiary Foundation Certificate Programme, The University of Auckland</i></p> <p>Room N230 Success for all: Improving Māori and Pasifika Student Success in Foundation Level Study <i>Elana Taipapaki Curtis, Sonia Townsend, Tanya Savage, Airini, Faculty of Education, Faculty of Medical and Health Sciences, National Institute of Creative Arts and Industries and the Careers Centre, University of Auckland</i></p> <p>Room N309 The Adult Literacy and Numeracy Assessment Tool <i>Dr Gill Thomas, Maths Technology Ltd</i></p> <p>Room N222 “Watch that First Step ...”: Two Australian Approaches to Widening Participation in Higher Education <i>Dr Barry Hodges, Open Foundation</i></p>	<p>Linda Russ MIT</p> <p>Martin Bryers NorthTec</p> <p>Alex McKegg Unitec</p> <p>Jane Terrell AUT</p>

		<i>Program, University of Newcastle, Australia</i>	
		Room N203 Weathering the Tertiary Capped Funding Storm: A Positive Initiative to Support Special Admission University Students <i>Liz Chinlund, Karen Davis and Alistair Shaw, University Preparation Programme, Victoria University of Wellington</i>	Kirk Sargent MIT
11.50-12.45	Papers/workshops: <i>Session 5</i>	Room N222 Adult Literacy and Life Skills Survey <i>Paul Satherley, Anne Lee, Ministry of Education</i>	Trisha Hanifin Unitec
		Room N309 Experiential/Action Learning – An Approach to Helping Students Understand the Mysteries of Academia <i>Margie Matthews, NorthTec</i>	Christine Clark CAG
		Room N201 From Rags to Riches <i>Phillipa Junger, Preparation for Tertiary Training, Shirley Porter, Mathematics Learning Adviser, Bay of Plenty Polytechnic</i>	Robyn Davey MIT
		Room N203 Cycles of Curriculum Change: Bridging Educators as Curriculum Developers <i>Dr Teresa S. Fernandez, Waikato Pathways College, The University of Waikato</i>	Catherine Walker AUT
		Room N230 Using Literacy Tools and Strategies as a Foundation to Enhance Students' Learning and Study Success <i>Hazel Owen, Bettina Schwenger, Unitec Institute of Technology</i>	Linus Treefoot Massey
12.45-1.45	<i>Lunch Cafeteria N100</i>		
1.50-3.00	Best Practice Sessions		TBA
3.00-3.20	<i>Afternoon Tea Cafeteria N100</i>		
3.20-3.40	Conference Close Lecture Theatre N222		Rae Trewartha