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# **Comparison of polytechnic based bridging education programmes and models in Aotearoa/New Zealand**

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# Abstract

Bridging education programmes enable under-qualified students to gain qualifications to enter tertiary courses and the workforce. These programmes have been developed in the polytechnic sector at institutional levels and without national co-ordination. This project seeks to compare and contrast features of bridging education provision in polytechnics in Aotearoa/New Zealand through information that was sought from staff and students involved in these programmes by way of recorded interviews. Materials, including course descriptions and programme handbooks, have been collected and the common content, themes and philosophies drawn out and presented. Observation by the researcher has also been used to complement and supplement the material sourced.

The purpose of this study is to gather information about these bridging programmes and analyse how staff and students see them working. By mapping the sector, much of the good practice that has been developed over the many years the programmes have been offered can be drawn out. Documenting where the polytechnic sector is at in its delivery of bridging education programmes will enable practitioners to reflect on their own practice and will assist policy makers with their understanding of current practices.

Benseman and Russ (2001) were able to define many of the diverse characteristics of bridging education provision in New Zealand. As with much good research their findings left the sector asking more questions than before they published. This paper also builds from this research and asks the following questions of participants in the polytechnic context:

- What is the purpose of bridging education?
- How is bridging education being delivered in four polytechnics/institutes of technology in Aotearoa/New Zealand?
- Who is involved in bridging education, as staff, and as students?
- What are the theoretical perspectives that underpin bridging education delivery in polytechnics/institutes of technology in Aotearoa/New Zealand?

The project identified a number of diverse models of delivery and advocates the need for programmes that focus on purpose and product rather than standardised content. The skills of staff, and their knowledge of bridging education was not consistent across the institutions included in this study. A perceived need by stakeholders for a centralised and co-ordinated approach to bridging education provision at both institutional and at national level also became apparent through the study.

## Acknowledgments

This thesis is the product of not only the research undertaken into bridging education programmes in four polytechnics/institutes of technology, but also of four years of post-graduate study, and my work in the role of Head of Foundation Studies at Manukau Institute of Technology. Whilst all have been a privilege and fantastic learning experience, I would like to first humbly thank the students on the Foundation Education Programme at MIT who over the past four years have inspired and motivated me. I feel honoured to have had the opportunity to work with you all and am in constant awe of your abilities.

To my lecturers and mentors from Massey University, thank you for challenging me to think and act outside of what may be considered normal in post-graduate studies. To Marg Gilling specifically, I promise to try and never neuter a subject I feel so passionately about again.

To my professional colleagues, thank you for the discussions and debates. I don't believe we will ever get it 'right' and the day that we think we have is the day we must no longer continue to work in this field. To Margaret James, thanks for the commas, and your wisdom and passion that you share without censure whenever we meet. To Jan Davey and the other 'believers' in student potential around the country, thanks for accommodating my research requests and me. The relationships that we have established, if nothing else, make this research process worthwhile for me.

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# CHAPTER 1 – BACKGROUND

## ***Assumptions and motivations underlying this study***

Bridging education programmes aim to provide pathways for students into tertiary institution programmes by providing students with the skills, knowledge and confidence to succeed. Many are based on equity principles aiming to increase participation and, most importantly, the success of diverse and often non-traditional student groups. Because of this they have increasingly come into favour nationally as well as regionally as current political agendas seek solutions to address the educational polarisation of Aotearoa/New Zealand society. Forecasted demographic changes necessitate that central government and individual institutions seek to develop strategies to address the inequities of participation and success in tertiary education programmes. Bridging education is one proven successful strategy.

Bridging programmes in the polytechnic environment have grown over the past two decades and now, in some institutions, represent a significant number of student enrolments. At Manukau Institute of Technology there are over 500 equivalent full-time students enrolled in one of the institute's bridging programmes. There are established operational procedures and lessons to be learned from each of the existing programmes described in this study.

The current political interest in the establishment of effective foundation and bridging education policy and programmes, at the time of commencing this study (2003), appeared to be devoid of information from the existing successful programmes. As the head of one of these programmes, I believed that there could be benefit from drawing together the strengths and good practice from bridging education programmes in the polytechnic sector to help guide the policy makers in

their endeavour to map a future for this sector. This was based on an assumption that these programmes were, in fact, successful nationally as they are at Manukau Institute of Technology, an assumption based primarily on anecdotal evidence.

I chose, therefore, to visit a number of polytechnics/institutes of technology and to explore the bridging programmes they offered. The logistics of a longitudinal study across the programmes seemed beyond the scope of this project, so I instead looked to the staff and student perceptions of the programmes, about what made them work, how they worked, their purpose, and their philosophies.

This report whilst summative in nature, in that it is presented to meet the requirements of a Master of Education, is also very much a reflection of the formative process of learning of the researcher. I have been challenged by my supervisors to step out of the perceived safety afforded by qualitative research and to look at validating the voices that underpin many of my own beliefs in relation to bridging education provision. By focusing on students and staff perceptions, the influences that I have on a day to day basis as a practitioner in this field, become cemented in the research body of knowledge around bridging education.

I have not been able to reconcile some of the inherent processes of research reports, in particular the need for a stand alone 'literature review'. All literature reviewed has been viewed within the context and understandings generated by this study, and as such I have chosen to integrate my interpretation of literature throughout this report.

I would also like to acknowledge in preparing this report that my age, gender, ethnicity and the position I have as head of the largest polytechnic based bridging programme are likely to bias the interpretation of information.

## CHAPTER 2 – BRIDGING EDUCATION

### *What is 'Bridging Education'*

Bridging education, being courses and programmes with the primary purpose of preparing students for study at tertiary level, has developed in many countries in response to issues of equity and social justice, and the development of a national workforce requiring educational credentials to secure meaningful employment (Anderson 2001). It has also been developed to target under-achieving students and enable institutions to draw from this catchment in order to grow student numbers. Funding for these programmes, which do not operate in the same way as many programmes in the polytechnic environment, has been tied to political determinism and individual institutions' commitment. The frequently marginal nature of the resulting programmes, has left the Aotearoa/New Zealand field with an under-developed base of theory and research (Anderson, 2001).

Bridging education programmes in the polytechnic sector were somewhat slower to develop in New Zealand than in the United Kingdom and North America. This has been attributed largely to the open entry policy of New Zealand universities whereby a student over 20 can gain entry to under-graduate level programmes, except where there are entry-level subject requirements such as for medicine or nursing. Bridging programmes in Aotearoa/New Zealand have developed on an institution by institution basis and tend to focus on the delivery of academic skills and introductions to specific tertiary programmes (Benseman & Russ, 2001).

## ***Defining Bridging Education***

Defining bridging education has caused difficulty for academic staff and educational policy makers for some time. Since the Tertiary Education Advisory Commission (2000) signalled its intention to make the acquisition of foundation skills an educational priority for all, the Ministry of Education as the policy arm of government, has been engaged in debate around defining and describing 'foundation skills' and 'key competencies'. This debate has been simultaneously occurring in practitioners' associations such as the New Zealand Bridging Educators Association Inc. At numerous times since its inception, Association members have debated the difference between 'foundation skills', 'foundation education/studies' and 'bridging education'. At a recent meeting (11 May 2004)<sup>1</sup> between Ministry of Education officials and NZ Bridging Educators Association of New Zealand Inc members, it was identified that current government thinking saw bridging education as a subset of foundation skills that specifically prepared students for further study, without necessarily providing them with a nationally recognised or devised qualification. While some consensus was achieved with this understanding, the interpretation of the definition and its implication for operation and policy still appear to be creating intense discussion/debate.

Foundation skills programmes, as they are being defined by Ministry of Education Policy, while often including similar content and skills acquisition to bridging education programmes, do not have as their primary desired outcome study at certificate, degree or diploma level. They exist to provide opportunities for the development of participation skills, such as literacy and numeracy. These skills aim

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<sup>1</sup> This meeting between sector representatives and Ministry officials occurred after a document summarising the Ministry's thinking on Foundation Learning and Bridging Education had been circulated. A response to the Ministry from the sector had been forwarded and the meeting was requested by the Ministry to provide clarity for the sector on their current thinking and to elicit feedback.

to specifically increase social, employment (and subsequently economic) and community engagement for peoples (Ministry of Education, 2004).

By comparing the features and purposes of tertiary based pre-entry programmes further definitions of these programmes have been developed. Foundation programmes have been identified as preparing exclusively for "*undergraduate study upon successful completion of a certificate programme.*" (Morgan, 2004, p.75). In contrast to this foundation programmes' definition Morgan identified bridging programmes as having a "*greater emphasis on exploring self concepts and the self in relation to a wider learning society*" (p.75). Study in bridging programmes is not targeted exclusively at preparation for degree level study, and is a product of the polytechnic environment where a range of qualifications and courses are available to prospective students at a range of levels.

One of the key points of difference between the foundation and bridging pre-entry programmes as defined by Morgan (ibid), is the use of mandatory pre-entry assessment and placement. As with US practice, mandatory pre-entry assessment is recognised as a critical initial step in bridging programmes. This focuses on developmental placement of students in courses according to their identified existing skill base.

In the polytechnic sector, bridging programmes, unlike university based programmes, have been seen to include a large component of assessment and credentialing (Benseman, Findsan & Scott, 1996). The role of assessment in the learning process of polytechnic based bridging programmes appears tied to the theoretical philosophies that underpin these programmes. The unit standard system that exists in the polytechnic sector aims to define standardised skill and content competencies, against which individuals are assessed. This unit standard

approach has not become part of New Zealand university operation and is not evident in many polytechnic based bridging programmes.

Polytechnic models of bridging programme that have been characterised by clearly defined learning outcomes, use of pre-entry assessment processes and a requirement for highly trained and specialised staff, has come to be recognised by governing bodies including the Ministry of Education (Ministry of Education Trends and Profiles, 2001).

In trying to measure the success of a programme, and or its participants, it is argued that the purpose of the programme must provide the guide to the appropriate tool (Anderson 2002). In polytechnic based bridging programmes where the purpose of programmes is to prepare students for further study, the measurement of success of the programme and the student must, therefore, be the successful completion of study in the destination programme of choice. In keeping with this proposition the New Zealand Bridging Educators Association has argued that the introduction of a foundation skills qualification or key foundation competencies would result in learning that is assessment driven and would foster development of a rigid curriculum.

A common philosophy among Aotearoa/New Zealand bridging educators is that in delivering programmes that assist students to gain the necessary skills and qualifications for success in tertiary programmes it is necessary to recognise that students are full human beings. Students' attitudes towards learning, their motivation, their self concepts and their confidence have as much or more to do with their success as does the acquisition of academic skills and content knowledge (Morgan, 2004). Bridging education programmes need to consist of more than just isolated or 'low level' courses and support services. They need also to provide a variety of courses that meet a range of identified learning needs, activities and

support services all based on a bridging philosophy (Anderson, 2002). Bridging courses, activities and services need to be lead by academic professionals who also value and understand the contribution research can make to practice, and are reflective practitioners (Boylan, 2002).

Bridging education provision in the polytechnic sector, whilst diverse in terms of the models of delivery, is based on core operational components and philosophies. The use of pre-entry or early assessment to determine student needs continues throughout programmes with on-going assessment being used to guide individual learning. Programme quality is measured by the ability of programmes to meet their purpose, which in the polytechnic context is to assist under-prepared students to gain skills and qualifications and entry to mainstream tertiary courses. The need for highly trained and skilled staff, in learning theory and practice as well as specific content, is reflected in bridging philosophies. These beliefs are core to bridging education delivery: bridging education must be approached holistically recognising that students are complex entities. Their learning/acquisition of skills must be seen in the context of their day to day lives, cultural heritage, and future aspirations.

## CHAPTER 3 - THE BRIDGING CONTEXT

### *Historical Perspectives*

*"lessons from the past can be used to help guide the future"*

(Bell, 1996, p. 53).

In looking at the historical influences that have contributed to the development of education in post-colonial Aotearoa/New Zealand it can be seen that bridging education has not always followed the identified trends of formal adult education in the tertiary sector. Shor (1986) identifies that the liberal and prosperous cycle of the 1960s/1970s in the United States, gave way to market driven, economic models that saw prioritising of economic and financial accountability of institutions. It was during this time and in contrast to these trends that bridging education programmes in the New Zealand polytechnic sector first emerged. Initially small in size with high costs, due to small classes and low student staff ratios, these programmes relied on institutional subsidies and support. The Manukau Institute of Technology Foundation Education Programme started in 1986 with 11 students. It relied on support from the Chief Executive of the time, Bob Williams, that included financial subsidies provided by the institution, according to the programme head of the time Margaret James.

It was, ironically, during this time of increasing economic accountability as the driving force in tertiary education (Easton, 1998), that participation levels in tertiary education steadily increased (Graham & Leach, 1996; Ministry of Social Policy, 2001). New Zealand/Aotearoa now leads the OECD with its entry rate of school leavers into Type A (degree level) tertiary programmes (OECD, 2000). Bridging

education in polytechnics has contributed to this growth in participation by working to increase rather than limit access to tertiary education.

In 1990 the educational landscape in New Zealand was redefined through the passing of the Education Amendment Act of 1990, (which was later consolidated into the Education Act 1989). This Amendment Act enabled the growth of a private education sector at tertiary level, giving legal status to Private Training Establishments (PTEs) and enabling them to access mainstream tertiary government funding sources. This de-regulation of the tertiary education sector was accompanied by a rapid rise in the number of providers. Many PTEs sought to address inequities in access to tertiary education and specifically targeted traditionally under-represented groups. In polytechnics bridging and foundation programmes were started in response to these same inequities in participation. In the early 1990s when evidence of equity strategies was required of polytechnics, the role of bridging programmes in meeting the needs of under-represented groups became more nationally recognised (James, 2004). Their value in increasing student enrolments was further complemented by meeting the needs of government education strategies targeting increased participation in tertiary education.

The growth in the PTE sector enabled more staff, many of whom were not from a traditional education background, to become involved in tertiary education. Many of the personnel did not have the qualifications or credentials desired by state funded tertiary institutions of their staff. The growth of the PTE sector was accompanied by the development of a national regulatory body, the New Zealand Qualifications Authority, which defined the quality process and learning outcomes Institutions were required to deliver in order to award nationally approved qualifications.

## ***Current Political Context: Integration or adaptation – who are the programmes for?***

Prebble, Zepke and Leach (2003) in their “best evidence synthesis” or summary of literature investigating how to improve student outcomes in Aotearoa/New Zealand, categorised approaches to student retention as integrative or adaptive. Integrative approaches aim to support students’ social and academic integration into tertiary institutions and have been seen as fitting the student to the institution. Adaptive approaches focus on the institutional change to accommodate diverse student groups.

Applying these considerations to bridging education programmes further questions the purpose of these programmes. Do they exist solely to prepare students for further study or do they also have a role in shaping the institutions in which they are housed to better respond to traditionally poorly represented students?

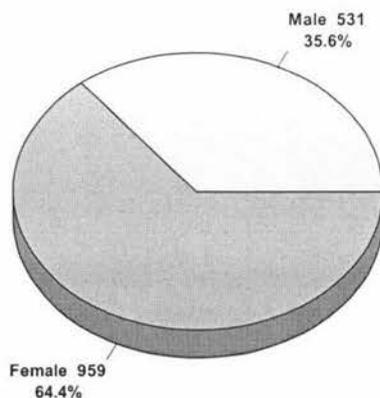
The essentially monocultural approach associated with ‘integration’ asserts that different cultural groups can be combined into a main social system, but at the same time, maintaining their own identity (Prebble et al., 2003). The purpose of bridging education can superficially be seen to be the integration of under-qualified students into mainstream education systems and structures. The integration concept and approach are based on the premise that groups within a society should be equal partners and that society should accept and appreciate each group’s culture and way of doing things.

Bridging programmes are, however, also by nature adaptive, in that they have not traditionally been part of the make-up of qualification awarding institutions. Their existence has changed the structure of the institutions and the ways some

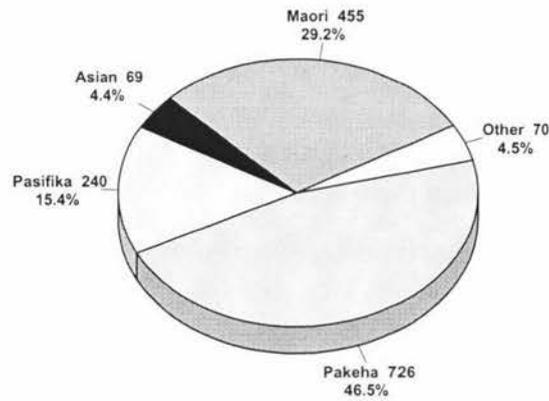
institutional sectors perceive and respond to diverse student groups. (Trewartha & Coltman, 2002). By increasing the diversity of the student population and ensuring the, often under-represented, student groups develop the confidence and skills to succeed in mainstream tertiary programmes, these students can go on to challenge institutional processes and perspectives. In the University of Auckland Bachelor of Education (Teaching) programme, staff report that those students who have pathwayed into the programme through the Manukau Institute of Technology bridging programmes tend to be more demanding of staff, asking more questions and seeking clarification and details of examples at a higher level, than 'direct entry' students.

In their recent study that aimed to "map this growing field of education provision", Benseman and Russ (2001) identified a number of characteristics of Bridging Education provision in polytechnics and universities in New Zealand. The following graphs are lifted from this report and describe the demographics of both staff and students participating in these programmes.

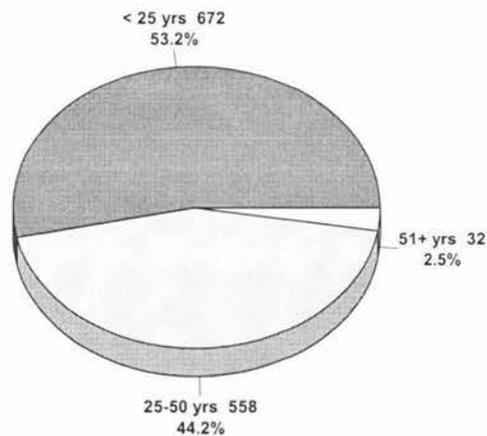
**Gender of Bridging Education Students**, from Benseman and Russ (2001)



**Ethnicity of Bridging Education Students**, from Benseman and Russ (2001)



**Age of Bridging Education Students**, from Benseman and Russ (2001)



This study also described the qualifications of students entering these programmes.

*"Sixteen of the 29 programmes provided data on the educational qualifications of their students. Consistent with being bridging programmes, most (10) reported that 80-100% of their students did not have any school*

*qualifications, one programme reported 60-79% didn't have school qualifications, two reported 40- 59 % and three others reported 0-39%."*

(Benseman & Russ, 2001)

In New Zealand many students come to the bridging education classroom after, at the very least, frustrating, and at the worst, deeply alienating, experiences in the classrooms of the traditional education system. For those from diverse groups their knowledge has often been classified as 'Other' and disregarded in favour of that promoted by the dominant Pakeha culture (Trewatha, 1999). Trewatha argues that in accepting students on to bridging programmes bridging educators have a responsibility to ensure that education is a liberating rather than oppressive process.

For Maori students the "Rights and Privileges", guaranteed to them under the Treaty of Waitangi<sup>2</sup>, further require that bridging programmes include perspectives and views of 'other' or non-dominant culture groups, specifically perspectives of Maori.

In his doctoral thesis Smith (1997) speaks of a "a new theory of change" that "has emerged ... out of ... Maori resistance initiatives" (p. 388). This new initiative developed from within the Maori community and "generalised under the label of Kaupapa Maori", ... "advocates excellence" within both Maori and Pakeha culture – "It is not an either/or choice – they (Maori) want full access to both cultural frameworks" (ibid, p. 388). Smith asserts that providing access to and the opportunity to excel in Pakeha education contexts thus is a Treaty right and Crown responsibility. Bridging programmes in polytechnics become part of the Crown's

response and bridging educators in polytechnics have a statutory responsibility to adapt their institutions to better fit the Maori students they are representing.

Bridging education has also developed in New Zealand at a time of significant demographic change. These changes are forecast to further affect the cultural make-up of New Zealand. On a national level the percentage of young (18 – 24) Maori and Pacific Islands people as a proportion of the population is projected to increase from 19% (Maori) and 7% (Pacific Islands) of the population in 1996, to 21% (Maori) and 9% (Pacific Islands) in 2006, and 31% (Maori) and 19% (Pacific Islands) in 2020 (Ministry of Education, 2000). The need to address the various learning needs of a more diverse student population and the subsequent pluralistic society will become an increasingly high priority for tertiary institutions. Bridging programmes that are responding with an adaptive approach to their diverse student bodies could provide insight into alternative models of operation.

In Aotearoa/New Zealand Maori and Pacific Island peoples are less likely to attain the school qualifications required to access degree level tertiary education programmes (Report of the Taskforce for Improving Participation in Tertiary Education, 1999). Those Maori and Pacific Islands people who do access tertiary level studies are more likely to be enrolled in certificate or diploma courses than degrees and postgraduate qualifications.

*"In 1998 for example, only 48% of Maori students, and 50% of Pacific Islands students were enrolled in degree and postgraduate courses, compared with 66% of all other students (Source: Ministry of Education Statistics 1998)."*

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<sup>2</sup> The Treaty of Waitangi is the founding document of the New Zealand nation. Signed by (some) Maori and representatives of the British crown the document establishes the basis of the relationship between Maori and

(Report of the Taskforce for Improving Participation in Tertiary Education, 1999, p9)

The impact of this is that Maori and Pacific students, in spite of being increasingly represented in tertiary education participation statistics, are less likely to see a corresponding increase in their earning potential or income. The level and type of qualification attainment has been shown to have a direct impact on the average income earned by New Zealanders in the 25 –34 age group.

<b>Qualification Attainment</b>	<b>Annual Income</b>
No qualification	\$25,400
School Certificate	\$26,800
7 <sup>th</sup> Form Qualification	\$34,400
Other tertiary	\$31,900
Degree	\$42,500

(Ministry of Education, 2000)

It can be seen therefore that in failing to obtain the highest secondary school qualification and/or enrolling in non-degree tertiary programmes Maori and Pacific students are less likely to be able to realise their earning potential. Whilst many would argue that the purpose of education is not only to increase earning potential, income is one measurable and tangible result of participation and succeeding in tertiary education.

With bridging programmes providing, particularly for non-traditional students, an access way to the economic and social advantages afforded as a result of tertiary education, their social role or the way they facilitate the learning process is also worthy of consideration. The programmes integrate students who might for a number of reasons not be allowed or able to participate in tertiary education in the polytechnic sector, into the structures and processes of the tertiary environment. In doing so the programmes also force a change in tertiary institutions forcing them to be come more responsive to their student demands. Whether this approach is merely a repeat of colonisation processes depends on both the effectiveness of the bridging programme in the development of its students, and the responsiveness of the institutions in which the programme sits to diversity in its student body.

## CHAPTER 4 : THEORETICAL INFLUENCES

### *Learning theories that underpin bridging programmes in polytechnics/institutes of technology*

The development of many bridging education programmes in the tertiary sector has occurred in an experiential mode, through trial and error. Bridging education practitioners sometimes question the place of theory in their programmes when their decision making is largely informed by their own practice rather than abstract theory that they see as not directly related to the context of the programme. Theorists, in contrast, would argue that in developing a theory consistency in decision making can occur. A theoretical focus can help reduce ad hoc, habitual practice and can encourage productive reflection and targeted research (Chung, 2001). The development of bridging education theory can therefore help maintain the quality of the educational environment for educators and participants as well as providing identity and credibility to the discipline (Anderson, 2002).

It is further argued that theory also can allow programmes to be reproduced across a number of institutions with different demographics. Lundell (1999) argues that reproduction when based on theoretical models is not based on an operational formula, but rather guiding principles of operation that are transported and incorporated into another environment.

Where theory development has occurred, papers have been written to link bridging education with existing theoretical frameworks (Higbee, 2001; Bruch, 2001; McGivney, 1990). Bridging education, however, is also sufficiently distinctive to warrant its own base of theory within the mainstream learning theories, informed

by research conducted within the bridging context. Theory development in any mode begins with a question. The central question in any investigation into theory in bridging education is "How do people learn?"(Anderson & Coltman, 2002).

A number of approaches dominate answers to this question. The mechanistic approach advocates that people learn in a reactive way to environmental pressures. By isolating human behaviours and rewarding/punishing them these behaviours can be taught or learned. In contrast, the organismic approach is based on a deterministic belief that human biological systems will ensure development. A third approach, the interactionist view, puts social interaction as core to the learning function. (Goswani, 2001; Moore, 1998).

### ***Mechanistic Approach***

The mechanistic approach is exemplified by Behaviourist Learning Theory. The focus is on observable behaviour. People learn in response to such external activities as reinforcement, stimulus control, shaping, modelling and extinction. Identifying core skills and removing them from their context so that they can be taught and learned is based in this approach (Overton, 1984).

### ***Organismic Approach***

The organismic approach is explained in the biological determinism of writers such as Jean Piaget. The idea of a universally applicable set of stages for cognitive development sees learning as a biologically determined sequence of cognitive skills achieved through discovery based activities (Piaget, 1975). The formal operations stage at the top of this developmental sequence is most applicable to adults and relates to the requirements of formal adult study. A universal sequence of learning is apparent where this approach is taken. Bridging students are given the opportunity to "catch up" by filling in the stages from their incomplete education.

***Interactionist Approach***

Both the aforementioned views assume a common knowledge and skill set which must be mastered before the student can succeed in tertiary education. In contrast the interactionist view sees knowledge/skills as bound to cultures and communities and without universality. Cross-cultural research has shifted theories of learning towards the socio-cultural "interactionist" view in studying learning (Rogoff, Mistry, Goncu & Mosier, 1993; Scribner & Cole, 1981).

The interactionist view is seen in the work of Vygotsky and later writers who have extended his thoughts focussing on the importance of human interaction in the learning process and the value of community in defining essential learning (Cole, John-Steiner, Scribner & Souberman, 1978; Vygotsky, 1962). Rogoff (1990) proposes learning as a process of "transformation of participation" achieved through interaction with more expert others in a form of apprenticeship. This idea of learning could influence the structure and delivery of bridging education programmes. Applying Rogoff's ideas bridging students learn how to participate in discourses they are unfamiliar with through interaction with lecturers, other students in the bridging programme and through direct contact with students in their destination programmes.

***Constructivist Approach***

To recognise and build on the variety of experiences and skills acquired prior to bridging suggests a need to consider local, community and cultural ways of learning more so than looking for universals (Gee, 1998). This constructivist approach requires the student to take an active approach in the learning process and views academic staff as "resources" in the learning context rather than "content controllers" (Arlidge, 2000).

### ***Critical Theories***

In acknowledging the limitations of these theoretical approaches the relevance of critical theories and their application to the bridging discipline can also be explored. Critical theory is an over-arching expression that embodies a number of theories that challenge the status quo. The work of one of these theorists that has particular resonance to bridging education programmes is that of Paulo Freire. Freire and his supporters (Findsen 2002; Lather 1992) base much of their ideas around the concept that adult educators should be fully conversant with the socio-cultural context in which their students conduct their lives. For bridging educators this requires cognisance of the cultural and material realities of their students.

*"All pedagogies are situated – specific and contingent to the cultural fields within which they operate"*

(Lather, 1992, p.121)

This provides a challenge in the staffing of bridging education programmes. Findsen (2002) advocates through his interpretation of Friere's work that educators, ideally, should come from within the group – "one who emerges from the particular cultural group and who understands the social norms and aspirations of the people".

The organic nature of most polytechnic based bridging programmes means that no singular theory drives their operation or structure. As they develop in response to changing institutional, community and demographic needs, theories of learning that tend more to the critical approach are emerging. The unpublished works of a number of bridging educators (Harford et al, Morgan, Trewartha) look to the deconstruction of existing theories and practices so as to embrace a more diverse student population and enable them to have access to tertiary programmes.

# CHAPTER 5 – MODELS OF BRIDGING EDUCATION

## *New Zealand Models*

Benseman and Russ (2001) defined models of bridging education provision in New Zealand describing them as:

*"A – programmes in a department specifically designed to bring students' academic skills up to a level where that can gain entry into a higher level of programme in other academic departments*

*B- programmes within conventional departments aimed at bringing students' academic skills/qualifications up to a level where they can gain entry into other programmes within that department*

*C- programmes that allow students with lower levels of qualifications entry into programmes and then provide on-going support for them while they are in that programme"*

(Benseman & Russ, 2001, p.27)

These descriptions are based around where the programmes are located within their institution and to where the students are being bridged, as well as the way in which they operate.

A model receiving some consideration from the Ministry of Education in their development of foundation learning policy is the proposed Definition and Selection of Competencies (DeSeCo): Theoretical and Conceptual Foundations Strategy paper OECD, (2002). This paper seeks to identify the core competencies required for

participation in modern society and has been developed across a number of nation states.

The model acknowledges that skills can be

*"acquired and developed throughout life and can be learned in a variety of institutions..."*

(OECD, 2002, p. 9)

The approach to learning in the model is steeped in developmental theory and requires,

*"a common vision of the world as a normative reference point is (as) necessary..."*

(OECD, 2002, p. 10)

A number of competency areas are identified in the model

***"Acting autonomously***

*ability to defend and asserts one's rights, interests, responsibilities, limits and needs*

*ability to form and conduct life plans and personal projects*

*ability to act within the big picture/the larger context*

***Use tools interactively***

*ability to use languages, symbols, and text interactively*

*ability to use knowledge and information interactively*

*ability to use (new) technology interactively*

***Functioning in socially heterogeneous groups***

*ability to relate well to others*

*ability to cooperate*

*ability to manage and resolve conflict"*

(OECD, 2002, p12)

In an letter to the Ministry dated 24 June 2004 bridging educators have expressed concern that the DeSeCo model does not appear to be embracing of diversity and is based on a principle of equality rather than equity. Whilst recognising cultural context as having impact on the relative importance of the key competencies, the competencies themselves are centred in western ideologies and beliefs, for example, the belief that conflict is the basis of relationships with other and must therefore be 'managed'. This universalist approach contradicts and excludes the existing foundation skills/education paradigms which have diversity as their core assumption – diversity being a core characteristic of New Zealand education.

The discourses of such competency based models are intent on promoting learning based on the idealistic dream that institutes of education, be they formal or informal, are places where the slate is wiped clean as the students walk through the door each day. This system, based as it is on the ideals of scientific modernism, denies the validity of individual difference by ignoring the place each student's particular history plays in his or her ability to learn (Trewartha, 1993: 58).

### ***Centralisation of Delivery***

*"Retention is an institutional, not a programme responsibility".*

(Noel, Levitz & Saluri, as cited in Boylan, 2002)

The same can be said to be true of bridging education.

Internationally, centralised bridging or developmental programmes have consistently been found to be more successful than decentralised ones (Boylan, Bliss & Bonham, 1997; Rouche & Baker 1987, Rouche & Snow 1987, Donovan, 1974 as cited in Boylan, 2002). Centralisation, in this instance, refers to the institutional

arrangement in which bridging courses and services are highly co-ordinated, housed in a single department or programme and headed by a senior manager. Centralised programmes, according to Boylan (2002), are characterised by:

- *Having several developmental subject areas coordinated under a single unit*
- *Having a clearly articulated philosophy to guide programmes*
- *Combining support services within the laboratories.*
- *Having a single individual responsible for coordinating the campus wide developmental education effort.*

(p.)<sup>3</sup>

This centralised model, however, is not the only effective means of delivering effective bridging education. Decentralised programmes can result in high levels of integration and communication across courses and services. For this to occur there needs to be an administrator with institute wide coordination of bridging education activities. Decentralised but highly coordinated programmes, according to Boylan (2002) are characterised by:

- *Regular meetings of all those involved in the delivery of courses and services*
- *Articulation of common goals and objectives for all developmental courses and subjects*
- *Integration of academic courses and academic support services*
- *Co-ordination of developmental courses and service by an administrator with primary responsibility for campus wide bridging education.*
- *Need to allow for meetings to discuss: programme problems, outcomes, professional development. Needs to be across team meetings.*

(p.)

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<sup>3</sup> Please see final page of document explaining the lack of references

In the delivery of bridging education in polytechnics in Aotearoa/New Zealand both centralised and decentralised approaches are being used.

## ***International Models***

### ***United Kingdom***

The United Kingdom has an well-entrenched system of bridging programmes known as Access to Higher Education Programmes. Aimed at 'mature students' and those under-represented in tertiary education, they are based upon the provision of knowledge and skills in both subject content and academic skills with many offering guaranteed places in higher education programmes. Their success has been attributed, in part, to the tighter restrictions for entry into tertiary or higher education.

Many of the courses in the Access Programmes are modular in their delivery. This allows students to study as much or as little as they like, change courses mid programme and has been developed in part due to an awareness of the need to cater for mature students many of whom continue to maintain employment while studying. (James, 1991). Criticism of this modular approach has been expressed by students with their readiness for the intensity of degree level study being questioned. They are worried that their knowledge is too fragmented and are critical of the lack of examination practice.

### ***United States of America***

Community Colleges, types of tertiary institutions in the USA, offer a wide range of technical, vocational and liberal arts programmes, many of which can lead to an Associate Degree after two years of successful study. A student who has gained an Associate Degree at a Community College can usually transfer to a university and complete two more years to gain a Bachelors Degree. These colleges act as

bridging programmes to universities and offer courses outside of a destination institution (Stahl, 2002).

Development education programmes in the United States are located within universities and aim to provide academic support to under-prepared students or to courses with identified lower pass rates (Boylan, 2002). These programmes are usually large and encompass a significant portion of the university activities. In some universities students may study developmental papers, which bear no degree level credits, at the same time as credit bearing papers. This has been seen to result in an integration of bridging students with mainstream students and a reduction of the stigma attached to these courses (James, 1991).

Research into the effectiveness of developmental education programmes has shown:

*“Students participating in developmental programmes tend to earn higher grades than similar students who do not.*

*Students participating in developmental programmes tend to be retained at higher levels than students who do not.*

*Students participating in developmental programmes tend to show greater gain scores on standardised tests than students who do not”.*

(Boylan, as cited in James, 1991)

In addressing the financial constraints of students from low socio-economic environments, colleges and universities in the USA have a policy of employing their students in unskilled and semi-skilled positions within their campus of study. In addition evening developmental education programmes recognise the need for students in employment wanting to gain access to higher education.

A further feature of many developmental education programmes is their integration with local high (secondary) schools. Students in the final years of their high schooling can opt to take both credit bearing and non-credit bearing papers through aligned universities and colleges. These courses, as with most developmental education programmes, are highly subsidised by the state departments of education (Stahl, 2002).

### ***Australia***

Responsibility for the development and implementation of bridging programmes in Australia is left to individual institutions with strategic guidance provided in the Federal Government's 1990 *A Fair Chance for All* policy guideline. Extensive and state-funded research has shown that bridging programmes in Australia have increased participation of groups traditionally under-represented in higher education (McNamee as cited in Ministry of Education, 2001), improved motivation, confidence and problem solving for students (Bourke, Cantwell and Arthur as cited in Ministry of Education, 2001), and contributed to students achieving at a level significantly higher than expected of them (Lake as cited in Ministry of Education, 2001).

## CHAPTER 6 – RESEARCH METHODOLOGY

### *Research Aims*

The purpose of this study is to identify the features, focusing on staff and students' perception of strengths and weaknesses, of bridging education provision in four polytechnics in Aotearoa/New Zealand. From these polytechnics it was hoped to provide guidance to the developing sector and an opportunity for practitioners involved in the sector to reflect on their current practice. Information was sourced using a qualitative research perspective, in part because it was felt by the researcher that the staff and student voice was missing from earlier quantitative research (Benseman and Russ 2001) into bridging education provision.

Materials, including course descriptors and programme handbooks were collected and compared drawing out common content, themes and philosophies.

The four polytechnics were chosen on the basis of their membership of the Tertiary Accord of New Zealand (TANZ). As participating partners, the four polytechnics have demonstrated a willingness to share ideas and practice and have established relationships of trust. It was assumed that these relationships would enable staff and students to share their thoughts about their respective bridging education programmes without fear of competitive advantage being lost.

## ***Development of a Methodology***

The choice to use a 'qualitative enquiry' approach, as described by Merriam (1998), in this study reflected the desire of the researcher to gain a broad staff and student perspective of bridging education provision. By acknowledging contextual meaning, the methodology required the data to be collected in a manner that allowed interpretation and acknowledgment of the unique individual environments in which these programmes operate.

The writings and reflections of Irwin (1994, 2000), Tuhiwau-Smith (1999) and Smith (1990, 1997) in their numerous and comprehensive writings into Kaupapa Maori methodology significantly guided the choice of methodology processes. Tuhiwai-Smith (1999) identified the over-researchedness of Maori. The researcher of this project had concerns that for many bridging students this 'researched to death' phenomena, that exists in the current education climate where increased participation and foundation learning skills are identified as government priorities, needed to taken into consideration in formulating research processes. These concerns were not unjustified when it is noted that the participants from one of the programmes had been involved in four doctoral thesis projects, one Ministry of Education research project, one TEC research project, one New Zealand Qualification Audit, and a significant number of student research projects in the course of a calendar year.

Bridging students by nature are perceived to fall outside of the traditional student catchment found in tertiary institutions. Their contribution to understandings of how learning occurs and what features of the system need to be amended in order that there is more equitable success, makes them a highly attractive to those in the pursuit of academic knowledge. Whilst for most, assisting with these processes is

not openly identified as a problem, it must remain at the forefront of all researchers' minds that these are first and foremost students who are paying significantly to participate in these bridging programmes. In recognition of the contribution the bridging students have made to this project the researcher, as part of the interview process, made available to students personal on-line assistance with any difficulties the students may encounter in their learning to date. This offer was not extended to the students in one of the programmes where the researcher is employed.

It was important therefore that the bridging students who participated in this project could see 'positive, pragmatic and innovative outcomes' from their involvement, or at very least that the research was relevant to their own involvement and participation in the programmes. As the researcher is involved in both the delivery and management of bridging education provision at one of the institutions involved, is the Treasurer for the New Zealand Bridging Educators Association, and is involved through a number of national working parties in formulating bridging education policy, legitimacy of the project in the eyes of both staff and students was addressed. Holmes (1996) notes these relationships have the advantage of "providing a legitimate role for the researcher and an obvious and acceptable rationale for the research" (p. 17).

Much of the current research into bridging education provision has been purchased by specific government ministries or Crown entities to fulfil the outputs of these organisations. As such these research projects are arguably not truly independent, but a purchased product owned by the state. There is a feeling among some bridging educators that these state-funded research projects look at existing programmes in the context of what is already decided to be best. Whilst funding has been received to cover the costs of travelling to each of the institutions this final report remains independent from ownership.

Bias in the project is, however, present. The researcher, as stated earlier, is the head of one of the largest bridging programmes in Aotearoa/New Zealand. The process of the institution and that particular programme serve as a benchmark against which others were compared.

In choosing a focus for the qualitative orientation of the research it was decided that the process of the research itself would guide this focus. By acknowledging that research is itself a process of learning, and that meaning or understanding of how the different bridging programmes worked would become apparent through conversation and actual visits to them, the researcher endorsed the interpretive perspective as described by Meriam (1998).

As the research proceeded and individual institutions were visited the inductive logic of research began to unfold. Reoccurring themes and ideas began to emerge that could generate both discussion and recommendation from the research project (Davidson & Tolich, 1999).

### ***Ethical Considerations***

The research proposal for this study was presented to and approved by the Research and Ethics Committees of Massey University and Manukau Institute of Technology. The Deputy Chief Executive of Manukau Institute of Technology approached Chief Executives of participating polytechnics/institutes of technology on the researcher's behalf. Approval was given for commencement. Intending participants were provided with an information sheet (Appendix 1), a consent form (Appendix 3) and a list of guiding questions for taped interviews and focus groups (Appendix 4).

## ***The Research Process***

The published works of Tolich and Davidson (1999) and Clough and Nutbrown (2003) provided the theoretical background in the development of both the research question and process. Experiences obtained by the researcher in working with other researchers, both as an assistant and a subject, also informed practice.

Having obtained ethical approval for commencement from MUHEC, contact was made with key personnel identified by Chief Executive Officers at each institution. Advice was sought on which programmes they believed would be relevant to the study. For the purposes of the study, bridging education programmes were defined as those programmes that had as their primary purpose the preparation of domestic students for entry into a number of destination programmes. This definition was based on the researcher's belief in some of the key functions of bridging programmes, which as opposed to stair-casing programmes, include:

- that they have an equity basis and aim to increase participation of under-represented groups
- that they have multiple outcomes, and do not pathway students to only a small range of courses or programmes.

This definition was shared with personnel assisting in locating the respective bridging programmes in each institution. Having identified appropriate programmes details of the proposed research were forwarded to the respective programme/department heads and individual institutes' research and ethics committees for approval where necessary.

Before visiting each of the sites, telephone contact was made with programme/department heads and times made to meet with them. In all cases, programme staff assisted the researcher arranging focus group meetings with student and staff groups before he arrived.

At each polytechnic/site, at least two staff and one student group were interviewed. At the larger urban based polytechnics, where staff identified a number of bridging education programmes, more interviews/focus groups were held. A total of 12 staff interviews and 9 student focus groups were conducted.

Student focus groups comprised of volunteers from students enrolled in the bridging education programmes and students were provided with adequate and appropriate information about what such participation would involve. Each focus group contained between 3 and 8 students. Interviews with key staff and management involved in the operation of polytechnic based bridging programmes were also conducted.

Written informed consent was obtained from all subjects before the interviews and focus groups were commenced. Consent forms are stored securely and archived in accordance with Manukau Institute of Technology policy.

## ***Data Collection***

A semi-structure questionnaire was developed to provide a framework for the interviews and the questions were trialled with focus groups before the research project commenced. This process enabled the researcher to engage in active communication with programme participants and staff, but allowed enough flexibility for conversations to develop rather than simply the oral completion of a

questionnaire. For staff and students, it enabled the researcher to be transparent in both the assumptions and beliefs being brought to the interview, and also provided some clarity around where the interview was going. Food was provided for all participants and all staff groups were given resources from and information about the programme in which the researcher works.

This process fell somewhere in between the formal and unstructured interview processes identified by Davidson and Tolich (1999). Whilst the participants shaped and guided the interview/meeting there was a structure that allowed the researcher to pull conversation back to the research question if this was deemed to be necessary. The conversational nature of the focus groups could have been interpreted as 'casual' according to Neuman (1997), however there was a clear element of the 'stimulus-response' feature of more structured interviews. As the questions had been forwarded to staff before the interview/focus group (in most) participants had had time to reflect on their perceptions before meeting. Whilst this approach is not always advocated as being prudent in research, it was adopted for this project in recognition that all participants were fitting these meetings into already busy schedules.

Permission was sought from all participants to record all interviews. These were later transcribed by two independent transcribers funded through a grant from the Manukau Institute of Technology Professional Development Fund. Introductions were made in each audio recording, as advocated by Gillham (2000a) for later identification. At the end of the interview / focus groups participants were provided with an opportunity to ask questions of the researcher. Discussions often ensued that yielded additional constructive data for analysis.

For one of the student groups interviewed, whilst they had agreed to be recorded, it was only when the tape recorder was turned off and removed from the table that

conversation started to flow. In part because of this, following each interview / focus group, observational field notes of subjective views were recorded. These reflections were later added to transcriptions to assist in later data analysis. These notes also allowed for paralinguistic information to be recorded, including non-verbal communication and tone of voice, however the cultural subjectivity of this information was also noted.

Course outlines, programme handbooks and promotional material were also collected. This was used to gain information on how institutions and staff perceived their programmes. It also provided information that students were given before commencing their studies. Operational processes, core courses and programme requirements were also identified through this method. Where possible, this information was collected before the focus groups/interviews were conducted so that the researcher had a broad understanding of the programme and was able to engage in meaningful conversation with the participants.

Subsequent requests for demographic data about students participating in bridging programmes was also sought, but was not forthcoming. This data had been sought primarily to determine if bridging programmes were increasing access to tertiary study at polytechnics to a more diverse group of students than those found throughout the rest of the institutes, an assumption of the researchers.

## ***Data Analysis***

Initial analysis of transcribed interviews and focus groups compared responses from both bridging educators and their students. Entering responses to specific questions on a multi-layered database enabled comparisons across the institutions,

as well as between staff and student perceptions. Additional comments made by participants but not in response to questions, were also added to the database.

Themes had been identified in the formulation of the questions and were based on the assumptions developed by the researcher from readings and experience in the field. As data was analysed and some of the underlying hypotheses tested, new themes emerged. Another 'layer' was added to the database and these themes provided additional information for the comparison of programmes across institutions. This constructivist process (Hargraves, Bell & Barker, as cited in McNae, 2002) developed an interpretive stance as the research took place over four months allowing for contemplation and theorisation.

Themes identified were in no way mutually exclusive, and thus much of the information gathered appeared repeatedly. Through a process of identifying both the commonalities across institutions and participants and also the exceptions/differences/atypical features the process of analysis was progressively refined. Pre-testing interview questions with student and staff groups before commencing the study, ensured that the process of two-directional analysis as advocated by Tolich and Davidson (1999) occurred.

As the data was worked and reworked, more and more questions emerged and many of the assumptions that had existed at the beginning of the study were challenged. The researcher had initially articulated an aspiration to define a single and 'best practice' model for bridging programmes in the polytechnic context. Over the process of the project, this aspiration was reluctantly shelved and the value of the 'one model fits all' questioned. The focus of the study increasingly became processes and theories that have the potential to ensure that quality teaching and learning experiences are consistently available in bridging education programmes in the polytechnic sector.

## Chapter 7 - FINDINGS

There are common philosophies and theoretical basis underpinning the operation of the polytechnic based bridging programmes included in this study. These philosophies are translated into very distinctive operational models that reflect individual institutions' development.

### ***Descriptions of Individual Programmes***

The programmes included in this study were diverse in operation as well as in defining characteristics. For the purposes of this study the programmes are referred to as Programme A, Programme B, Programme C and Programme D. Each was located at different polytechnics/institutes of technology, and each institute was in a different town/city in New Zealand. All institutes served primarily urban communities, and operated in locations where there was also a university and private training provider presence.

The programmes ranged in size from 800+ students to 5 students. For one programme, Programme B, 2004 was its first year of operation. Programmes D and A had been in operation for over 10 years. Two of the programmes were identified as having been started as equity initiatives, Programme A and Programme B.

Programme C was a unique and recently implemented programme that followed a model or structure different from the other three programmes. It became apparent that Programmes A, B and D were closely linked in their style of operation and course content. Programme leaders/developers had sought out expertise from the

operation of Programme A, either directly (Programme D), or through other programmes at their institute (Programme C), when developing their programme.

### ***Programme A***

Programme A is the largest bridging programme included in the study with over 800 full-time equivalent enrolments in 2003. The programme has a long history of 18 years and is accommodated in a purpose-built facility on one of the campuses of the polytechnic. Like two of the other programmes included in the study, the programme is made up of a number of core courses, with students opting into additional elective courses depending upon their destination programme or the vocational pathway they have chosen.

Core courses are based around communication, study skills, mathematics, and basic computing disciplines with an additional career planning course. Although a large proportion of the students enrolling in the programme have a clear goal there is a commitment to all students completing this career planning course. Staff have observed repeatedly students changing their career/study choice as their awareness of other options is developed. It is key to this programme that students be able to transfer from one 'pathway' to another without financial penalty.

One of the identified features of this programme was the integration across discipline-based courses, for example Communication and Advanced Science. Both of these courses are assessed through a major research project that sees the skills of research and report writing contextualised within a science framework. The programme's senior staff identified a matrix approach to developing courses that plots skills acquisition from the core courses against the content and context of discipline-based courses.

All students entering this programme complete diagnostic assessments. Programme staff use these assessments to determine the suitability of existing courses and to ensure the developmental placement of students. Where it is identified that a student either already can demonstrate the skills that form the heart of the courses, or has not yet acquired the basic skills required to participate in the programme, these applicants are referred to other more suitable programmes. As a result of this testing, and because of the size of the programme, a number of courses at different developmental levels are offered, as with Programme D. Students are able to commence their studies at a level that will both support and challenge them. For example, there are four levels of Communication and five levels of Mathematics.

The programme's success is measured by the attrition and retention rates of students enrolled in the programme, the percentages of students successfully bridged to further studies, as well as student satisfaction. Attrition continues to remain well below the reported 30% norm in first year studies and 94% of students in 2003 were successfully bridged to either employment or further study. Student satisfaction levels are measured annually through research projects carried out by students as a credit bearing part of their studies. Unlike all other programmes included in the study, there is no qualification offered to students. Records of achievement for individual courses are given to those who complete and pass the academic criteria of these courses.

The programme continues to grow in student numbers at around 20% per annum. This growth has been consistent since the programme's inception and is seen as an indication of the widely felt need for bridging education and the success of this particular programme. A perception of staff outside of the programme is that this growth and success is also because of the community in which it is located. It is located in a city in New Zealand that has a high proportion of under-represented

communities in tertiary education domiciled around it. The student demographic mirrors that of the local community.

In addition to the core programme delivered on the central campus, a selection of courses are also delivered offsite at a number of locations, including: neighbouring primary schools, private training establishments, community centres and churches. Evening classes, which have fees subsidised by the institute, are delivered in a range of Pacific and migrant community languages using the context of computing to introduce tertiary study to traditionally under-represented groups.

### ***Programme B***

The smallest of the programmes reviewed, Programme B is a stand-alone programme targeting specifically Maori and Pacific students who wished to access this institute but lacked either the confidence or qualifications to do this. The programme is a replication of a programme delivered by the institute at another one of its campuses. Looking at the names of the courses being delivered and the structure of the course outline documentation, it became apparent that the programme is based on a number of the courses delivered in Programme A.

The courses delivered in Programme B at the time of the study were Communication, Introductory Mathematics, Study Skills, Computer Learning Skills and Future Focus (a career planning course). The programme is delivered in the afternoons, five days a week in one central room, with one tutor delivering all courses. The explanations for this approach were that because the programme is free to students (no fees), they are able to access rooms for use only in the afternoon. The use of one staff member, as opposed to a number of staff was backed by a philosophical belief in the need to establish a 'whanau' of learning enabling a very holistic approach to be taken.

Up-take of the programme had not been as high as initially anticipated. Retention of students was a concern, although staff (the tutor and non-teaching programme co-ordinator) identified that the programme needed significant modification before its next occurrence. The lead-in time into setting up the programme had been short but significant reflection and action research methodology was being used by staff to consider alternative operating processes and content.

Because of the programme's relative infancy, little printed material was available for analysis.

### ***Programme C***

The model of bridging education found in Programme C was arguably the most radical or different, when compared to the other three programmes included in this study. This programme aims to provide greater flexibility and choice for students to access a wider range of courses at the polytechnic than do traditional bridging programmes. It is the only institute-wide co-ordinated approach to bridging education included in this review. The model, whilst an institutional response, has not been seen as the only applicable model at the institute, and other bridging programmes similar to the other three included in this study, also exist.

Programme C identifies the core competencies required for students to succeed in most tertiary studies programmes. These competencies or skills are then packaged into a number of compulsory courses, which like the other bridging programmes, focus on the acquisition of study, communication, computing and numeracy skills. Students complete these courses whilst also enrolled in entry level courses within their destination programmes. The combination of the courses required for entry to specific programmes is decided by the destination programme.

A unique feature of the Programme C model is that students are identified not as foundation or bridging students, but rather as students in the mainstream programme in which they are concurrently enrolled.

Entry to the Programme C bridging programme is normally through interview, although most of the students interviewed in this research project identified that they had not been interviewed at entry. Rather, they had been referred to the programme at the time of enrolment because they did not meet the entry criteria of the programme including, if English was not their first language, the required IELTS level.

This was the only bridging programme included in this study that actively targeted international student enrolments. In addition to developing language skills for international students (where this was necessary) the programme aimed to develop an awareness of the disparities that may exist between the Aotearoa/New Zealand tertiary system and other international models of tertiary education, particularly in relation to the learning expectations of students.

Staff identified a perception of being caught in between diverse discursive demands and requirements. There was little apparent integration between the targeted bridging courses and the discipline-based courses the students were enrolled in, according to staff delivering the bridging courses. They were not aware of the content of the non-bridging courses and identified that the same courses were taught regardless of the students' background or capabilities when entering the programme. There was also less contextualised learning occurring than bridging staff would have liked. Communication across the courses was primarily at a management level and there were few opportunities for teaching staff to collaborate.

The staff identified some frustration with the lack of cohesiveness and base for the programme. What appeared to be a very unified and across institution approach to bridging, had in operation resulted in the further marginalisation of the students and staff involved in teaching this programme, from the staff perspective.

The programme was like Programme B, relatively young. It had been going for only a small number of years. Its growth, however, had been significant and reflected positively on the institute's co-ordinated approach. The staff delivering the bridging courses were committed to the principles of bridging education and had a number ideas of how the programmes could become more effective. These included, specifically the centralisation of the delivery of the bridging courses into one site (building or series of rooms) and the establishment of a structure that recognised the uniqueness of bridging education and the holistic approach required for staff to be effective bridging educators. Staff were keen to see a School of Foundation Studies, with dedicated personnel, like the structures of Programmes A, B and D.

Staff had found a receptive institute management structure in the establishment and ongoing delivery of this programme. Initially some of the courses had been developed to be delivered solely on-line. This was not found to be acceptable to students who had identified a preference for face-to-face instruction and contact with academic staff. Amendments to delivery had occurred and staff had felt supported in their review of the delivery of these courses.

### ***Programme D***

This generalist-bridging programme has a strong science focus. It is housed within a science based School and has been operating for over 10 years. The programme has a number of pathways, options or endorsements that enable students to gain

discipline specific knowledge and skills required for identified programmes in the polytechnic.

Students study towards an introductory certificate or a qualification at either level 3 or level 4, completing a number of core and some elective modules. The level of the elective modules and the number of elective modules taken determines the level of the qualification. The introductory certificate is targeted at students who have less than 3 years' secondary education experience and pathways students to the level 3 qualification (it is implied, but not stated, that this is New Zealand based secondary education). The level 3 qualification acts as a pathway for students to National Diploma and Certificate level courses and the level 4 qualification prepares students for degree level study.

Core courses or modules in the programme, as with programmes A and B, focus on the acquisition of:

- Study skills,
- Academic reading, writing and research skills
- Practical computing skills
- Basic mathematical skills

Elective modules include courses in pure sciences (Chemistry, Physics, Anatomy and Physiology, Mechanics) as well as more advanced academic writing, computing and mathematics courses. The programme is targeted to pathway students to both courses within and outside of the School in which it is offered.

The numbers on the programme remain relatively small (about 60), and at the time of the interviews, the institute was looking to establish another bridging education programme within another faculty. It was suggested that the new model would be

based on the Programme C model and there was no clear indication of whether this would supersede the existing D model or complement it.

### ***Staff in Bridging Education Programmes***

The characteristics of the staff interviewed were generally consistent with the demographics identified in the Benseman and Russ 'Mapping the territory' report. Over half were female, two-thirds were pakeha, and only one out of twelve was under 25. Their personal pathways to their work in foundation education programmes identified that a large number of the staff had formal teaching qualifications and experience in the compulsory school sector.

Of those that had come from a formal teaching background, many identified that the environment of bridging programmes was what attracted them to the tertiary sector.

*"Insufficient resourcing or management skills in top of hierarchies [in secondary education environments] to achieve the kind of support characteristic of [name of programme] for their students and each other. A lack of leadership in the secondary system is in contrast to the openness and friendliness, which is remarkable in [name of programme]. Leadership isn't about cliques – it's about creating a model of positivity but also active listening that has genuine positive change as its goal"*

Staff member, Programme A

The other predominant pathway to working in this area was that people had come in to teach on a programme that they were interested in, and had developed a passion for bridging education subsequently. While most staff had graduate qualifications, it was identified by staff at Programme B, C and D that they had not undertaken any specific or targeted training relating to the delivery of bridging education courses per se. Their skills had been developed through reflective process and discussion with their peers.

Programme A staff had regularly undertaken professional development programmes targeting specific issues of concern to them. For the past three years all staff had been able to attend a Bridging Educators' Conference, although some had identified that the content of the conference was not engaging for them and were choosing to look to other avenues to develop their skills.

All programmes identified a requirement for their staff to have completed or to undertake training in applied adult teacher training courses if staff did not have recognised teaching qualifications.

### ***Students Completing Bridging Programmes***

Most students participating in the bridging programmes included in this study were doing so because they perceived a need to gain the necessary skills or credentials to access and succeed in specific tertiary programmes. Many had been referred to the programmes by other departments within the polytechnic, as they had been considered not to meet the prescribed entry requirements for programmes. Students in focus groups identified their reasons for enrolling in the programme with statements like:

*"to do this course so I can do my Diploma in Early Childhood in 2004"*

*"to prepare myself for further education"*

*"to join the police afterwards"*

Programme A

*"so I can study at [name of institution]"*

Programme B

*"we want to get into the Diploma of Business but must pass this first"*

*"so I can...go on and do my design course and you know – pass"*

Programme C

*"I wanted to do the Nursing course, but they wouldn't let me, and said I had to do this one first"*

Programme D

Students in Programmes B, C and D had all nearly completed their bridging programmes at the time of being involved in this study. A significant number identified that their study/career aspirations had changed since commencing their study. In contrast, others felt their study/career choice had been affirmed though the process. Students in all programmes repeatedly spoke of 'goals', and measured their performance against the attainment of these goals.

Students in Programmes C and D were identified by staff as demographically being representative of the polytechnic student population (age, gender, ethnicity). In contrast, Programmes A and B had a disproportionately higher number of students from under-represented communities. Programme B was only open to Maori and Pacific students, whereas Programme A was open to a range of students but had

high participation rates of Maori and Pacific Nations students. The demographics of students on Programme A are reflective of its local community, rather than of the polytechnic. Staff in Programmes C and D, attributed this high participation of Maori and Pacific students in Programme A to its location (the institution is in one of the most diverse communities in Aotearoa/New Zealand). This fails to acknowledge that Programme A has a different demographic to the rest of the institute, unlike Programmes C and D. These programmes (C and D) drew their students from a wider geographical base than the other two programmes. Both programmes had students that had moved to live near the institution, often moving cities, to complete the programme. Students on Programme A, in contrast, predominantly lived within a 20km radius of the institute.

All students involved in this research project spoke positively of their programme of study, and, in particular, the academic staff who were delivering the programme. While the reason for their enrolment in the bridging programme was a source of concern for students, particularly where there had been no pre-entry assessment, all identified value in completing their programme of study.

*"I believe that a bridging programme is necessary for those that have been a long time out of the study environment. It is essential that all the necessary tools are again reintroduced especially if the student plans to go on to do a degree. I want to lecture one day for students like this. It is an exciting atmosphere when you get the 'right' mix of students."*

Student, Programme A

## ***Philosophical / Theoretical Orientation***

In investigating the philosophical purpose of bridging programmes, staff and students were asked a number of core questions:

- What are the programmes' purposes?
- Why do they exist?
- How do you believe students learn?
- What is needed in the environment to enhance learning?

These core questions were based on earlier work completed by the researcher (Anderson & Coltman, 2002; Coltman, 2002; Trewartha & Coltman, 2001) looking at student perceptions of non-completion and the considered use of theory in the practice of bridging education in Aotearoa/New Zealand.

### ***Programme Purpose***

In examining the identified purposes of the programmes there are a number of shared understandings across institutions and among staff and students. These shared understandings also feature in the programme aims as identified in their promotional/instructional literature. All identify the acquisition of skills as the main function of the programmes, and all have the specified goal of entry into another educational programme as their purpose.

Student handbooks and programme/course information guides for the four bridging programmes stated:

*" the \_\_\_\_\_ programme will help you to develop your capability in generic skills, study skills and/or specific content knowledge or experience for entry to your programme of choice."*

*"this introductory course offers you the chance to gain the skills and knowledge needed for further study."*

"\_\_\_\_\_ aims to assist students by providing:

- i) a thorough academic grounding in the subject content.*
- ii) an emphasis on the development of the academic study skills and personal management skills that lead to successful study at tertiary level and/or employment.*
- iii) a supportive environment that promotes independence and confidence in students."*

*"This programme aims to provide learning opportunities for students so that they can gain the necessary skills to apply for entry into further courses at ....."*

(all quotes taken from student handbooks, programme/course information guides)

These shared understandings sit as the core purpose or principles guiding the operation and structure of these programmes. There are also a number of other shared themes that emerge from the data on the purposes of programmes as well as themes that are uniquely a 'staff' or 'student' perspective.

### **Table 1**

#### *Student, staff and shared themes about the programmes' purpose*

<b><i>Student Themes</i></b>	<b><i>Shared Themes of Purpose</i></b>	<b><i>Staff Themes</i></b>
Encourage learning while enabling students to retain their cultural identity	To provide a healthy and safe environment for students to learn/change.	Understand the culture of and support available in tertiary education institutions.
To enable students to be successful after completion of	To provide qualifications/skills that enable students to get into	Confidence for students.

the bridging programme	degree/diploma level courses	
For students to learn what they might like to do	Provide access to tertiary education in a polytechnic environment	Provide access to diverse communities for institutions from which to recruit.
	Provide a second chance for students	

### **Programme Differences in Purpose**

One of the identified differences between programmes involved in this study was where, that is what tertiary courses, these programmes bridged to. In Programme A, students identified that the purpose of the programme was *"to help students to employment and get students ready for places like university"*. All other programmes identified that their programmes were specifically designed to bridge only within the institute they were studying in.

Programme A staff also identified the purpose of the programme as being *"to provide subjects and support so that students can begin at whatever level they test into..."*. As a result, the programme has a thorough pre-entry diagnostic process developed by specialist literacy and numeracy advisers. The lack of such a formal and transparent pre-entry assessment was identified as a concern for participants from Programme D. They were not aware why they were being 'required' to do the bridging programme and felt that it was a revenue generating programme of the polytechnics, and another gate which they had to get through before they could commence their desired course of studies.

'Confidence' is a skill that for many bridging and foundation skills educators, is seen as part of an essential skill-base students need before they are able to succeed. Defining or measuring 'confidence' and 'self esteem' continues to be the source of

much debate among bridging educators. For students interviewed, all identified that in order to get to where they are, that is enrolling in a bridging programme, they had the necessary confidence to access tertiary studies. Any deficit they had was in skills required for successfully studying at tertiary level.

### ***Why do they exist?***

The identified reasons that bridging education programmes exist were consistent across institutes and among staff and students studying and working in these. It is perceived that, in order access meaningful and financially rewarding employment, there is a need to have tertiary, academic or vocational qualifications.

Both staff and students identify that the programmes exist because of failures experienced or chances not taken in the compulsory education sector. For some staff, however, this failure is seen to be systemic rather than that of the individual. This provides a challenge to educators across the primary, secondary, tertiary and adult and community sectors.

*"they address an equity issue in New Zealand education. Secondary Schools just can't meet the needs of every student. [name of programme] provides an alternative."*

Staff member, Programme A

In addition to an arguably altruistic 'equity' justification for bridging education, staff and students at three of the programmes identified that the programmes were also market driven. There is a market need that can be met, and for institutions this allows income to be increased through more enrolments.

*"to increase EFTS"*

Staff member, Programme A

*"there is a market there. There is a need. The thing is, you see people, you see a market..."*

Staff member, Programme D

*"it exists because there is a need for it. [Name of Institution] can make good money out of it too."*

Student, Programme C

Staff also identify a need for students to understand how tertiary institutions function, including how the various faculties and sections interact. This is so that, when the students have completed their bridging programme, they are able to be successful in their destination programme. For many students, the structure and ways of doing things in tertiary education is foreign to them.

*"...just finding your way around. Having to deal with that and then you go into class and the lecturers are telling you to use the timetable and all this other important information but you are still coming to terms with, you know, this huge building..."*

Staff member, Programme B

*"so I see it as part of my job to help them understand the culture of the organisation, how to make it work. Like learning services. If you take your essay and get help with your grammar, it's not actually being deficit."*

Staff member, Programme C

For one of the bridging programmes, students and staff discussed the need to be 'safe', to have their cultural perspectives valued, as being one of the reasons why the programme existed.

*" I reckon that [name of programme] exists so that we can be who we are, like our culture, and its okay to be ambitious..."*

Students, Programme A

*"Firstly, students need to operate in a 'safe' environment where they feel, valued and respected."*

Staff member, Programme A

These students implied that from their previous education experiences they expected their beliefs, customs and values not to be accommodated in mainstream tertiary education programmes and institutions. This raises a further question as to whether bridging programmes, in fact, continue the educational colonisation process by providing unrealistic and safe environments that are not representative of the programmes the students are wanting to study in. Alternatively, it could be suggested that the perceptions that the students have of tertiary education are unrealistic, and that institutions are, in fact, accommodating of diverse groups of students.

In summary, bridging programmes were seen to exist because of an identified need in the community. Institutions, government and community identify the need themselves. Often the existence of this need has been attributed to a perceived failure in the secondary / compulsory education system. Bridging programmes are also seen to exist, not necessarily because of any deficit in the

secondary/compulsory education system, but rather because the timing of secondary education is not always right for the student.

### ***How Do Students Learn?***

*"Beware the man who wants to fit you out in his idea of a hat. He's fitting you out for more than that"*

Sam Hunt (NZ poet) as cited by staff member Programme C

Gathering perceptions on how bridging students and educators believe learning occurs is the core of this project. From these espoused theories of learning it is possible to identify what guides the practitioners in their delivery of bridging education programmes. Students identified from their own learning experiences, both within and outside of the bridging education programme, the way they believed they learn best.

Students tended to identify good learning experiences as including active participation and contextual learning.

*"Hands on man. We are physical people."*

Student, Programme A

*"Doing everything practically. I got to see it, do it, then I'm right".*

Student, Programme C

This view was also shared by staff and was common to all sites. Having the opportunity to make mistakes without being penalised for them was a re-occurring

ideal. Alongside the opportunities to experience success, staff and students identified the need for students to be able to make mistakes, and not be penalised or punished for these. The recognition of learning from mistakes is key to the learning processes in bridging education.

*"[name of lecturer] doesn't tell us off if we make a mistake. So you don't feel like a dummy. He reckons its good when we make mistakes cause other wise he won't have a job."*

Student, Programme B

*"I think the students learn by doing the stuff and by them asking questions and by making mistakes. Our job is to sort of refine the process so that we're here to answer their questions, we're here to encourage their questions, we're here to encourage them to not worry about making fools of themselves, not to worry about exposing their own ignorance, making them feel comfortable about themselves and as a group"*

Staff member, Programme C

*"And with the opportunity to fail, making mistakes being built into the process."*

Staff member, Programme D

Assessment, as a feedback tool for both students and staff, is highly valued in bridging education, as is skills development that is focused on student interestd and needs.

*"Like giving you interesting work not just the achievements"*

Student, Programme C

*"It's not just about having the piece of paper man, its about all the skills you're learning on the way. Like building ourselves up for it. The Degree. To know where we're heading and we're more able. Makes you want to learn extra stuff not just enough to pass."*

Student, Programme C

*"we tend to be over-assessing at this level so that we can provide constant feedback to students and when students get to degree programmes that is not necessarily a feature of it."*

Staff member, Programme D

The issue of the relationship between the assessor and the student was also highlighted. Students felt that they needed to have a relationship with the person that was marking their work. In an environment where central government seeks to standardise bridging education provision through nationally accredited achievement standards, the relationship of the student to the educator becomes more crucial if students are to accept the moderation of work that is sometimes intensely personal.

*"It's a question of them having a close relationship with the person that deals with them so they know its their work that is being judged not them."*

Staff member, Programme C

For students in all programmes motivation, planning and the opportunity to have contact with their peers were seen to be important for their learning. Overwhelmingly for students the importance of a relationship with one, or a number or individuals, is important.

*"By listening to those who were here and those who already got their qualification from the universities and stuff, but they started here from the [name of institution]"*

Student, Programme A

*"I have learned heaps in my study groups, aye"*

Student, Programme A

*"we all try and do our homework together in the whanau room outside, you know help each other out and stuff"*

Student, Programme B

*"by watching and talking with your class mates, and other people around, and by having the will to learn."*

Student, Programme C

Content knowledge of staff and their apparent ease with a subject were also viewed as important.

*"I had a tutor with a computer course that I did and she was really cool, really funny and quite sort of relaxed but she just knew what she was talking about like – I can't stand tutors that sort of confusing or just ramble on a bit and talk in a monotone, but she was really interesting and she was sort of young and just, I don't know she just captured everyone's attention and yeah knew what she was talking about"*

Student, Programme C

Staff gravitate towards terms such as 'scaffolding' and 'contextualised learning' in describing their understandings of how students learn.

*"Students learn through experience and by applying their skills in a real world context. As teachers, lecturers or whatever you want to call us, we scaffold new ideas and content onto what they already know. But the student has to feel 'safe' and valued and respected and they have to believe in their own ability."*

Staff member, Programme A

Staff in Programme A, where the use of pre-entry assessments exists, also advocated that for students to learn there must be engagement at a level that meets identified individual student needs.

*"the courses have to start at an appropriate level, move at an appropriate speed and be challenging. They [students] need to be involved in their learning not just spoon-fed or lectured at."*

Staff member, Programme A

### ***The environment required to enhance learning***

Participants were united in their ideas about the sort of environment needed for bridging education to be effective in polytechnics. The questions asked in staff interviews and student focus groups did not look at the appropriateness of having bridging education in polytechnics, as opposed to it being housed in private training establishments or universities. Instead, the questions focussed on features of the physical and social setting that encourage effective learning.

The shared perspectives for the sort of environment needed to assist student learning were:

- A discrimination free environment
- Nice rooms that are close together
- A place to 'be' not just a place to learn
- People who care.

The last idea was the most prevalent. For both staff and students the quality of staff involved in bridging education, in terms of their teaching skills as well as their ability and desire to understand their student group, was of paramount importance. Whilst all programmes had well intentioned staff who relished their role in helping students, there was a different feeling in the environments where staff had a belief in the capabilities of their students and didn't view them as automatically having 'special' learning needs.

*"It's always, always about people [name of staff member], you and I know this,..., it's about people, it's about you guys [students], it's about us talking, it's about have a clear profile of the students and it's about people.*

Staff member, Programme C

A number of the staff in the programmes talked about needing to 'crack' their students, to get them to open up to them. Interestingly, this need for openness seemed to be more a staff need than a student need, and reflected a staff desire to be connected or engaged with their students. Arguably this could be seen to reflect the holistic nature of bridging programmes, or to reinforce the control held by staff in the learning process.

The need for a place for students and staff to interact was identified by both staff and students. In programmes where a space to meet outside of classrooms and away from general student and staff facilities, such as the cafeteria or staff room, existed, this was identified as a highly valued and prized resource.

*"the whanau room, number one. Definitely"*

Student, Programme B

*"having somewhere to talk about individual students with their other teachers is so important. Its those conversations over the cups of tea in between classes where you find out what's going on."*

Staff member, Programme A

*"somewhere to talk, prepare food and do some work is good."*

Student, Programme A

There are common philosophies and theoretical bases underpinning the operation of bridging programmes based in polytechnics in Aotearoa/New Zealand. These philosophies are translated into very distinctive operational models that reflect individual institutions' development.

## CHAPTER 8 – DISCUSSION

### ***Purpose of Bridging Education***

While previous studies have identified a tension between educators' practice and philosophical beliefs (Morgan, 2004; Hartford, 2003; Trewartha, 2001), particularly in relation to the purpose of bridging education programmes, this study makes the claim that the over-riding purpose of bridging education is widely understood in Aotearoa/New Zealand polytechnics. Staff involved in the delivery and student participants all understood the purposes of programmes to be the preparation of students for further study.

One of the weaknesses of this purpose alone being used to define bridging education is its over-simplicity. If it is accepted that any programme that has as one of its main purposes 'to prepare people for further study' is a bridging programme, then nearly all level 1, 2 and 3 programmes registered on the National Qualifications Framework could be defined at least in part as bridging education programmes. A Certificate in Tourism (level 3) that staircases into a Diploma in Tourism (level 4) could be seen as a bridging programme. Indeed a bachelors degree could be seen to be a bridge to post-graduate studies. Bridging programmes, therefore, are characterised by more than their purpose of study preparation.

### ***Equity Programmes: Is there a responsibility to effect change?***

Bridging programmes in the polytechnic sector target students who are otherwise not able to access a number of traditional tertiary programmes because they have

not attained the necessary credentials for entry. In commencing this study, it was anticipated that programmes would therefore be 'expanding the talent pool of students' as advocated by Anderson (2001) that institutions are able to draw from. Another underlying assumption is that bridging programmes can enable traditionally poorly-represented students to access tertiary studies. This was found not to be the case in two of the four polytechnics in this study.

It appears that this is one of the reasons why the government has identified foundation learning skills as a priority, identifying this as one of the ways education providers can help increase the participation of Maori and Pacific peoples in tertiary education, and particularly in degree level programmes. Many of the current programmes are not effectively increasing participation of traditionally under-represented groups. The programmes are reputedly successful in assisting to increase completion and success statistics of bridging students in mainstream tertiary programmes, but they do not necessarily increase participation of under-represented groups.

The assumption that expanding the talent pool from which institutes draw also addresses issues of under-representation, is not consistently being supported in the bridging programmes surveyed. Programme C, while clearly expanding the numbers of students accessing tertiary programmes at the institute, was perceived by staff and students in the programme to have a student demographic the same as that of destination programmes. Similarly, Programme D participants identified that their demographic was on the surface the same as the rest of the institute.

The question of who is participating in polytechnic based bridging programmes requires further investigation, and the inability of the study to secure quantitative data is a weakness. Are the programmes simply providing pathways to students who fall just outside of the typical student profile? Whilst the validity of this

purpose is not questioned, in not being embraced by diverse groups the programmes may perpetuate the systems and processes of the polytechnic sector that have, historically, been perceived to be excluding of diverse communities. Do the programmes continue an educational colonisation process, rather than challenging inequity in the polytechnic sector?

It is arguably not bridging educators' role to challenge the way things are done within their institutions. Their function is to enable students to succeed in whatever structures are in place. In this study, many have added that it is imperative the students do not lose their identity or sense of self in the process. The history of academia, and its ties to first the church and then the state (Day, 2004) has never had any pretence of being anything but exclusive. In an age where principles of equity are seen to underpin operation, some bridging education programmes, however take a subversive approach to reform, requiring their students to lead the change through demonstration of their capabilities.

The demographics of students participating also further influence discussion on programme purpose. Where the demographics of a programme mirror those of the wider institute, the success or value of the programme as an 'equity' initiative has to be questioned. The programme's purpose at an institutional level becomes only about increasing enrolments in its traditional programmes, rather than taking a role as an agent of change and addressing issues of perceived inequality.

Researchers, policy makers and bridging educators are looking to programme content and descriptive standards to further define what bridging education is. By trying to define the key competencies that need to be included in all bridging programmes, Gough (2002) argues that this limits bridging programmes to being "*a set of basic processes, skills or competencies tertiary students should have*" (p.1).

Bridging programmes therefore become defined by courses that aim to improve students' mastery of these skills.

With this approach the 'deficit' is perceived as being with the student, and bridging programmes become about identifying, describing and validating the practices of traditional tertiary programmes, and making them comprehensible to the students. This integrationist approach rarely questions existing structures nor the role of minorities in decision-making, and is often impartial to the maintenance of ethnic minority languages and cultures viewing their importance in economic terms. The impact of bridging programmes, therefore, is likely to be short-term and they act as an 'enculturator' or arguably a 'coloniser' of students into existing education processes.

Bridging education programmes must also have as a purpose then to challenge the status quo of mainstream education programmes' operation. There must be acknowledgment that our education systems and practices reinforce middle-class values and practices and that students' success is influenced by their aspirations, social class, ethnicity and gender (MEG, 2000 as cited in Gough 2000).

### ***The Issue of Fees***

If it can be accepted that bridging education programmes have the potential to address issues of unequal participation, as is the case in Programmes A and B, then the logic of requiring students, who are also generally over-represented in low socio-economic statistics, to pay to participate in these programmes is unclear. Only Programme B, which was subsidized by the Institute, was free to participants. Programme A, which was identified as having been started as an equity initiative,

had some free introductory community based courses, but the majority of students were fee paying.

Non-fee courses are provided at the discretion and good will of individual institutions. There is no additional funding provided to bridging programmes, or to their students, that recognises that these students have generally not received a satisfactory compulsory education experience, are over-represented in hardship statistics, and less likely to be able to access financial support from immediate family. It is of interest to note, however, that inclusion of fees does not appear to be a barrier to participation. In 3 of the 4 programmes included in the study, fees were a feature. The recruitment of students to these programmes was not identified as being more or less of a problem than general recruitment at each of the polytechnics. A difference worthy of further exploration is the difficulty smaller regional polytechnics face in recruiting students to their programmes that charge fees.

At the recent Association of Institute of Technology/Polytechnics Foundation Learning group meeting<sup>4</sup>, discussion around the funding of programmes meeting the needs of foundation learners moved the funding focus from programme to student. Whilst from an institutional perspective, having programmes funded regardless of the number of enrolments seems desirable, the benefit to the student of this funding model was questioned. By attaching any additional funding to students, or targeted student groups, educational providers are forced to develop programmes that meet the student needs, as well as identified policy directions. Normal quality management processes that are in place in the polytechnic sector ensure programme quality and allow the student satisfaction to be measured also

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<sup>4</sup> This forum which meets every six months and enables academic staff working in 'foundation' programmes in polytechnics the opportunity to discuss common concerns and to meet with government officials to discuss sector concerns. The meeting referred to above was held in November 2003 in Wellington, New Zealand/Aotearoa.

by growth (positive and negative) in enrolments. To fund programmes rather than students would further add weight to the argument that bridging programmes act as colonising entities.

### ***Location of the programme***

The location of programmes in institutes both geographically and structurally is a point of difference among the institutes studied. Only one, at the time of the study, had a stand-alone School for the delivery of its bridging education programme – Programme A. This School was none-the-less bundled in with a number of other programmes to make up a larger teaching department, that operated in a semi-autonomous fashion. Its position is, therefore, not dissimilar to that of Programmes B and D, which were housed within faculties with other mainstream or traditional tertiary programmes.

In all institutions there were a number of different programmes that have the expressed purpose to bridge students to further study. Staff identified that there was little co-ordination across these programmes. This de-centralised approach to bridging education seems to be favoured by institutes, but not necessarily by staff involved. The Programme C model was an attempt at a more centralised approach, but a perceived lack of leadership and operational support for the model, particularly by the academic staff, meant that they felt the approach was more fragmented than similar programmes in other institutions.

In implementing a co-ordinated approach to bridging education, institutes could reduce the repetition in programme delivery and ensure that programmes with a bridging function are delivered by skilled reflective practitioners with an interest in developing a transferable skill base with students. There is strong support among

bridging educators for the recommendation that the best way to teach bridging education is in an appropriate context. For many students this will be a traditional educational institution, such as the polytechnic, and preferably based close to the destination department or programme. The pedagogical principle here is that learning needs to occur as close to its destination as possible to ensure relevance (Anderson, 2002).

### ***Staff Issues***

A conflict that exists for bridging educators is whether staff with in-depth discipline knowledge and skills are the best people to be delivering preparatory programmes, or whether "bridging" is a discipline that requires its own teaching skill base. Also, if the role of bridging programmes is to challenge the status quo either directly or indirectly through their students, how plausible is it for a bridging education programme to sit in a traditional discipline based department or faculty?

There has been support for the notion in all programmes surveyed, and in international research, that having dedicated bridging staff is preferable to using overflow staff from discipline-based teaching departments. There appears to be an underlying belief that is evident in some tertiary teaching departments, that to teach at introductory level carries less status than, say, supervising post-graduate study. This is arguably partly because to teach at higher levels, higher qualifications are required of teaching staff. For bridging education to maintain credibility among the academic staff in the polytechnic sector it is important then that bridging staff are well-qualified and have access to equal opportunities for professional development.

## ***Core Competencies and Standardisation of Models***

A number of students identified that even though they entered the programme with an explicit goal, for example entering a nursing degree programme, they then decided that this study choice was not necessarily for them. This supports the centralisation of bridging programmes within an institute. Students as part of the learning process need to be able to transfer 'pathways' without penalty. This would be significantly more difficult where students are enrolled in Certificate programmes in individual departments.

To advocate that students are able to move from one 'pathway' to another implies that there is a core set of competencies that are universal and could form the basis of all bridging programmes. Indeed, all programmes in this study tended to have as part of their core programme courses on academic writing, study skills, basic keyboarding and basic numeracy. These could then be defined, by the fact that they were common to most programmes, as the 'core competencies' of bridging education.

One of the difficulties with this identification of core competencies is the shift in focus from the student to a set of abstract skills that require mastering. If these skills become the basis of bridging education programmes, then the purpose of the programme changes. It becomes only the acquisition of a set of skills. Morgan (2004), in her unpublished thesis, identifies this as the key defining feature between bridging and foundation programmes. Bridging programmes, particularly in the polytechnic sector, view the individual holistically, providing pathways for students to a wide variety of programmes, rather than just under-graduate degree programmes.

The skills required by students in a bridging programme are dependent upon what it is the student is wanting to achieve, and, if this is entry to another programme, what that destination programme is. The skills students bring to their study, particularly those acquired outside of a formal education environment, must be taken into consideration. The use of pre-entry assessments for students enrolling in bridging programmes is not wide spread. Instead academic qualifications and credentials gained within formal education systems have been more commonly used to determine programme suitability.

Bridging programmes where previous academic success becomes the primary determinant for entry to a programme, do not transparently value the learning that may have occurred outside of the formal learning environment and this can result in students questioning their need for academic preparatory programmes. The advocacy for pre-entry testing and developing courses that meet the learning needs of the students as identified in these tests is also supported in international literature. Boylan (2002) advocates strongly for the use of pre-entry diagnostic assessments and mandatory placement. In the bridging context, pre-entry diagnostic processes need to be used to determine the course suitability for the student, rather than the student's suitability for the course.

As stated earlier, there appear to be some re-occurring themes in bridging education programmes in relation to the content delivered. Inclusion of this content in a programme does not, however, necessarily make a successful bridging programme and can never be used as a measure for defining success. Measure of success is the progression of the student onto further study or the workplace, a far more complex as well as pragmatic goal than demonstrating competency against a pre-defined set of skills.

Specific content is sometimes required for different destination programmes. For the two programmes that specifically prepared students for study in undergraduate nursing programmes (A and D), some science content study was required by the destination programme. This process of negotiation of content mirrors the approach used by vocational courses to consult with industry on programme content, and allows them to be responsive on a more regional basis. Bridging programmes are able to successfully mimic this process, and it can include destination programmes from a number of institutions.

### ***Quality Processes***

Like other polytechnic based programmes, the development of bridging education programmes needs to be defined by quality processes and a sector specific accreditation and moderation plan. This will allow delivery of programmes to be contextualised to the environment in which they are being delivered and for the students to whom they are being delivered. This defining of quality processes would enable funding to be accessed by these programmes. However, in a recent letter to the Ministry of Education by the researcher, that was endorsed by the Bridging Educators Association of New Zealand and the Institutes of Technology and Polytechnics of New Zealand Foundation Learning Committee, it was recommended that this funding remain attached to the student.

## CHAPTER 9 – RECOMMENDATIONS

### *Recommendations*

The purpose of this study was to gather information about bridging education programmes and analyse how staff and student see them working. The process has allowed some polytechnic sector practitioners, including the researcher, to reflect on their own practice, and the evidence gathered will be able to be used by policy makers, at both national and institutional level, to guide the future development and direction of bridging education programmes.

The following recommendations are offered as learnings from this project:

- 1) That student voices be included in the ongoing development, and any new programme start up. Ensuring that developers and practitioners have a thorough understanding of these key stakeholders' desires and aspirations is vital in all further sector/programme development.
- 2) That bridging programmes be defined by process and product rather than content. As such, it is recommended that all 'bridging' programmes have multiple pathways/outcomes for students. This recommendation challenges the current operation of staircasing programmes/courses that, in delivery, focus on introductory or beginning level content rather than the skills required for ongoing learning.
- 3) That all bridging programmes engage their students in a process of critical reflection about the purpose, structure and requirements of traditional tertiary programmes. Where the outcome of the bridging programme is not

tertiary study the same critical thinking process needs to be embedded, and the purpose, structure and requirements of the outcome questioned.

- 4) That targeted funding be attached to the student, as well as programmes that meet government aspirations for participation. Whilst not completely addressing the inequity of students having to pay fees to participate in bridging programmes, this reinforces the need for programmes to meet the learning requirements of specifically targeted groups.
- 5) That polytechnics/institutes of technology be encouraged to develop more co-ordinated approaches to bridging education provision, using quality management processes to ensure that programmes have sound pedagogical bases. This recommendation does not advocate a single model for all bridging education, but rather that institutes are encouraged to develop coordinated models that meet the developmental learning needs of targeted communities and that ensure an institutional recognition of and commitment to bridging pedagogy.
- 6) That the 'professionalisation' of the bridging sector become a government priority. Whilst many adult educators working in bridging programmes have tertiary qualifications, very few of these were focused on or included bridging or adult pedagogy. It seems incongruent to have an early childhood sector and compulsory education sector where teaching qualifications are a requirement of staff, yet no such mandate existing for bridging education provision.

Whilst many Industry Training Organisations, through accreditation and moderation documents, require a transparent skill level of vocational tutors, bridging education does not have this accountability mechanism. Individual

institutes have policies and procedures around staff employment. If targeted funding is to be allocated to bridging programmes via bridging students specific skills and understandings need to be present in all staff involved in their delivery.

## ***Future Research***

This study process has raised many more questions around bridging education provision that require ongoing research and consideration. Mapping the provision of bridging programmes outside of the polytechnic sector would greatly improve understanding of the diversity of provision across the sector. Longitudinal studies looking at the impact of bridging education on students 1, 3 and 5 years after completion would provide evidence around the 'value' and 'colonisation' questions levied at bridging providers.

Assumptions that were present at the beginning of this study, specifically that polytechnic based bridging education programmes catered to a demographic not traditionally found in the polytechnic, needs further research. A quantitative analysis across polytechnics of demographic participation in bridging programmes when compared with the rest of the institution in which the programmes are housed would investigate the proposition that bridging education programmes expand the talent pool from which tertiary providers and the New Zealand workforce/economy are able to draw.

The attitudes and skills base of staff involved in the delivery of these programmes also warrants further analysis. It has been determined that student motivation and goal setting have a significant impact on their success in the tertiary environment. Do the diverse motivational drivers of staff impact on the quality of the learning

experience for students? And how are these diverse motivational factors evident in current programme delivery?

## ***Final Reflections***

In completing this study I have been reminded of the immense power held by tertiary institutions, and those working in/with them, to shape and mould the lives of a wide variety of people from a wide variety of settings. I believe that in many ways it is not beneficial that the responsibility and privilege of this remain in the forefront of our minds. If it was, our ability as educationalists to participate in the learning relationship would be crippled. To be reminded that this power exists, however, and to reflect on the ramifications of our work and decisions as bridging educators, is both necessary and, at times, overwhelming.

The privilege of the researcher to voyeuristically observe and engage with participants is also not lost on me. I have become both fascinated by this relationship, which is perceived to hold so much power, and weary of the addictiveness and indulgence that I find research process, for me, to be. The time spent in my own head, and in the works and lives of others has been a luxurious experience and I am deeply indebted to those who have contributed to my learning process.

I had sought through this project to define and describe bridging education programmes and practices with an underlying desire of developing some 'best practice' guidelines. As I began the study the laziness of this pedagogical approach became very apparent to me. It was/is based in an assumption that peoples with similar learning needs would benefit from similar instruction or educational methodologies. This fails to recognise the diversity of the participants in bridging

education programmes and the diversity of the programmes themselves. More than that, however, it fails to celebrate difference. Recognition and celebration are at different points of the diversity acceptance continuum.

The study has also drawn to the surface a concern that exists around bridging programmes, particularly in relation to their function in the polytechnic sector. Do they shield their institutions from making the changes required of them, particularly in relation to teaching practice, by a diverse student demographic? Theoretically the programmes do, or could, provide this shield. But this argument continues an oppressive patronising pedagogy that assumes bridging students need protection.

Bridging students, as with all students, come to polytechnic based programmes with a wide ranging set of skills. These programmes are about building on these capabilities and strengths and enabling these students to successfully pursue further tertiary study or employment. These programmes have been seen to fall slightly outside of the core vocational purpose of the polytechnic sector, yet their demonstrated success makes their development worthy of further consideration at policy and implementation level. The programmes are about people, about diversity and about access to equal educational opportunity. While much has been learned from these programmes in the past two decades of their operation, this research project has also shown there is much more to be learned.

# APPENDICES

## *Appendix 1 – Participant Information Sheet*



### PARTICIPANT INFORMATION SHEET

#### **Title of Project**

Comparison of Polytechnic based Bridging Education Programmes and Models in Aotearoa/New Zealand

#### **Researcher**

David Coltman  
 School of Foundation Studies  
 Manukau Institute of Technology  
 Private Bag 94006  
 Manukau City  
 Auckland

#### Telephone :

Work (+ [redacted])  
 Home (+ [redacted])

#### **Request for Participation**

This Information Sheet is an invitation to current and former students and staff of the (Insert name of Programme) at (Institute name of Institution) to participate in research being conducted by David Coltman into bridging/foundation education programmes in Aotearoa/New Zealand polytechnics.

Having gained approval to include your Institute in this research I will be visiting your polytechnic to conduct the interviews and focus groups. I will be seeking input from programme management and students on which key staff should be approached to participate in the research at the site level.

A group of students enrolled in the bridging programme will be approached to volunteer to participate in the focus groups. Again, guidance and support will be sought from academic managers and key staff. Where more than one programme exists, combined focus groups may occur. There will be no more than 3 focus groups conducted, and each focus group will have a maximum of 10 participants. Students will be included on a first come first served basis.

#### **Description of the research**

This research is being undertaken (in part) to meet the requirements of a Master of Education (Adult Education) qualification. The aim of this research project is to compare and contrast features of bridging education provision in polytechnics in Aotearoa/New Zealand. Information is being sought from key personnel involved in these programmes by way of recorded interviews with staff, management and students (current and former). Materials, including course descriptions and programme handbooks will be collected and compared with common content, themes and philosophies drawn out.

The research will be used to further inform practice, and to help guide the implementation of new bridging programmes. By recognising the strengths that already exist, and addressing perceived weaknesses I hope to develop an Aotearoa/New Zealand model, based not only on theoretical perspectives but also proven operations and perceived 'best practise'.

The information collected will be written up in a paper that will be submitted to Massey University. If the opportunity arises I would also like to be able to present the findings of the research to government and at academic conferences.

If you agree to help you will be involved in either:

- A one to one interview (staff); or
- A discussion group with other students (students).

With your permission I would like to tape-record these meetings. Your ideas about what makes the programme you are or have been involved with successful, and what are its weaknesses, what are its purposes, and why does it exist will be discussed.

It is anticipated that the meetings will take about 1 hour – 1 ½ hours. Some questions to help you think about Bridging/Foundation Education programmes will be forwarded to you one week before the meeting.

### **Safety of Participants**

Your participation in this project, while greatly appreciated, is not a requirement of your study / employment. At any stage you have the right to:

- decline to participate;
- decline to answer any particular question;
- withdraw from the study;
- ask any questions about the study at any time during participation;
- provide information on the understanding that your name will not be used unless you give permission to the researcher;
- be given access to a summary of the project findings when it is concluded.

No names of participants will be recorded in meetings, and every endeavour will be made to ensure the anonymity of participants. All identifying information, including signed consent forms will be stored in a locked filing cabinet in the student researchers office until the completion of the research project, at which point they will be forwarded to the research supervisor for storage in accordance with the Massey University Policy in Research Practice.

Once the recorded sessions have been transcribed a copy will be forwarded to you to check over what has been recorded, how it has been summarised or interpreted, and make any changes you feel necessary.

There are no serious risks associated with this project. Where you are, or have had, negative experiences of the course/programmes, the discussion/interview may highlight this for you.

A light lunch will be provided for all participants in the group meeting.

### Benefits of the Research

The research will be able to be used to inform practise and to help institutions support the operation of existing and new bridging programmes. It will contribute to the body of research in the area of bridging education in Aotearoa/New Zealand, and provide an opportunity for practitioners to reflect on current practise and for bridging education students to have input into the ongoing development of the discipline.

Copies of all final reports will be forwarded to participating institutions and iwi groups. You will be given an opportunity to say if you would like your own copy of the final report as part of interview/focus group processes.

### About the Researcher

Tena koe

*Thank you for giving of your time to consider being part of a research project into Bridging/Foundation Education programmes.*

*I am currently employed by Manukau Institute of Technology, in the School of Foundation Studies as the Head of School, a position I have held since July 2000 when I joined the institute. Prior to this I was employed as Head of Travel and Tourism at AIS St Helens which saw me responsible for the academic, student and financial management of vocationally based training programmes based on NZQA registered units.*

*I have a personal and professional commitment to equity, and in particular access to tertiary education. I do not believe the Foundation Education programmes at Manukau Institute of Technology to be the only or best model for addressing participation, including non-completion, for traditionally under-represented groups in tertiary education. They are, however like many other polytechnic based programmes, recognised as being successful.*

*I believe that as Bridging Educators we have a responsibility to the students to ensure that the barriers to their successful participation are understood and where possible strategies to address these barriers explored. I believe we also have an obligation to share knowledge of not only what is working and what is not but also why our programmes exist and why we are part of them.*

*I hope through the process of talking with other practitioners and students about the bridging programmes that they are a part of I am able to share practise and contribute to the body of New Zealand research in this discipline.*

*I acknowledge my responsibility for ensuring that the privacy, safety, health, social sensitivities and welfare of research subjects are adequately protected. I am aware of a possible perceived power differential resulting from my employment position, gender and ethnicity and that this could magnify the differential inherent in research relationships. My own cultural bias and the privilege of my upbringing could also influence my perception of the qualitative data collected.*

*This research is conducted as part of postgraduate studies towards a Master in Education (Adult Education) I am undertaking at Massey University. My supervisors for this research project are:*

*marg gilling      Sue Purnell  
Lecturer Lecturer  
Massey University (WLG Campus) Massey University (WLG Campus)*

Email: [m.gilling@massey.ac.nz](mailto:m.gilling@massey.ac.nz) email. [S.purnell@massey.ac.nz](mailto:S.purnell@massey.ac.nz)

*If at any stage you have any thoughts, concerns, ideas or feedback please do not hesitate to contact either Marg, Sue or myself. I am genuinely appreciative of your time and support.*

*Kia ora*

*David Coltman*

**Committee Approval Statement**

This project has been reviewed and approved by the Massey University Human Ethics Committee, WGTN Protocol NO/NO 03/130. If you have any concerns about the conduct of this research, please contact Mr Jeremy Hubbard, Acting Chair, Massey University Campus Human Ethics Committee, Wellington, telephone 04 801 2794 x6358, email [J.J.Hubbard@massey.ac.nz](mailto:J.J.Hubbard@massey.ac.nz).

## ***Appendix 2 – Consent Form – Institutional***



□

### **Comparison of Polytechnic based Bridging Education Programmes and Models in Aotearoa/New Zealand**

#### **CONSENT FORM - INSTITUTIONAL**

**THIS CONSENT FORM WILL BE HELD FOR A PERIOD OF FIVE (5) YEARS**

I have read the Research Proposal, Information Sheet and have had the details of the study explained to me. My questions have been answered to my satisfaction, and I understand that I may ask further questions at any time.

I agree/do not agree to \_\_\_\_\_ (name of Institution) being included in this study.

**Signature:**

**Date:**

**Full Name – printed**

**Designation**

## ***Appendix 3 – Consent Form – Individual***



### **Comparison of Polytechnic based Bridging Education Programmes and Models in Aotearoa/New Zealand**

#### **CONSENT FORM – (INDIVIDUAL)**

**THIS CONSENT FORM WILL BE HELD FOR A PERIOD OF FIVE (5) YEARS**

I have read the Information Sheet and have had the details of the study explained to me. My questions have been answered to my satisfaction, and I understand that I may ask further questions at any time.

I agree/do not agree to the interview being audio taped.

I agree to participate in this study under the conditions set out in the Information Sheet.

**Signature:**

**Date:**

**Full Name - printed**

## **Appendix 4 – Interview/Focus Group Questions**



### **INTERVIEW QUESTIONS**

The structure of interviews/focus groups discussion can be broadly grouped into four areas:

The participants and their relationship to the programme

What is your role in the programme/institute?

How long have you been doing that?

What are your experiences in a tertiary setting that brought you to your current role?

#### **The Programme**

In terms of your location within both the Institute and the sector how would you define your Institutes bridging programme?

How long has the programme been running?

How does the programme work for students?

How do students come to your programme?

What are the selection/recruitment processes?

What are the barriers to participation for students?

What is the financial cost for students to participate?

Is there a programme aim, mission or vision statement?

#### **Students**

How many students are in the programme?

Where do they come from?

Where do they go?

#### **Staff**

Where do you get your staff from?

What sort of qualifications/skills do you require of staff?

What sort of Professional Development do they participate in?

#### **Perceived Strengths of the Programme**

What makes your programme unique and different from other programmes in the Institute?

What makes the bridging programme successful?

What are 'positive' outcomes and how do you manage these?

What are the programmes weaknesses?

**Philosophical/Theoretical Aspects**

What is the programme's purpose?

Why does it exist?

How do you believe that students learn?

How does the programme cater to this?

What is needed in the environment to enhance learning?

## REFERENCES

- Adams, P., (2000). *Education and society in Aotearoa New Zealand: An introduction to the social and policy contexts of schooling and education*. Palmerston North: Dunmore Press.
- Anae, M., Anderson, H., Benseman, J., & Coxon, E. (2002). *Pacific peoples and tertiary education: Issues of participation*. Wellington: Ministry of Education.
- Anderson, H. (2000) *Bridging into Tertiary Education: Colonising or Creating Change?* Paper presented to the NZARE Conference, Hamilton.
- Anderson, H. (2001). Bridging Education: A critical element in New Zealand's educational future. Where have we been and where are we going?. Paper presented at *The Inaugural Conference of the New Zealand Association of Bridging Educators*, Manukau: Manukau Institute of Technology
- Anderson, H. (2002). *What to teach and how: Pedagogy for bridging educators*. Paper presented to the 2<sup>nd</sup> Conference of the New Zealand Association of Bridging Educators, Auckland, 2002.
- Anderson, H. (2003). Unpublished statistical data presented to the 3rd Conference of the New Zealand Association of Bridging Educators, Auckland, 2003.
- Anderson, H & Coltman, D. (2003) A New Zealand Bridging Education model: theoretical perspectives on practice in Thomas, L, Cooper M & Quinn J (Eds) *Improving Completing Rates Among Disadvantaged Students*, (2003), Trentham Books, London
- Arendale, D. (2002). History of supplemental instruction (SI): Mainstreaming of developmental education. In D.B Lundell, & J.L. Higbee (Eds.), *Histories of Developmental Education*, (pp15-27). USA: University of Minnesota.
- Arlidge, J. (2000). Constructivism: Is anyone making meaning in New Zealand adult and vocational education? *New Zealand Journal of Adult Learning*, 28 (1), 32-49.
- Assessment Reform Group. (1999). *Assessment for learning: Beyond the black box*. Cambridge: University of Cambridge School of Education.

- Bell, A., & Carpenter, V. (1994). Education's role in (re) producing social class in Aotearoa. In Coxon, E., Jenkins, K., Marshall, J. & Massey, L. *The politics of learning and teaching in Aotearoa – New Zealand*. Palmerston North: Dunmore Press.
- Bell, W. (1996) 'An Overview of Futures Studies' in Slaughter, R (ed) *The Knowledge Base of Futures Studies, Volume 1*. Indooroopilly: Futures Study Centre
- Benseman, J., Findsen, B., & Scott, M. (1996). *The fourth sector: Adult and community education in Aotearoa / New Zealand*. Palmerston North: Dunmore Press.
- Benseman, J. and Russ, L. (2001) 'Mapping the Territory: A National Survey of Bridging Education'. A paper presented at the *Inaugural Conference of the New Zealand Association of Bridging Educators*. Auckland, 2001
- Benseman, J. (2002). *Cross bridges into new territory: Some questions, some challenges*. Paper presented to the 2<sup>nd</sup> Conference of the New Zealand Association of Bridging Educators, Auckland, 2002.
- Benseman, J. & Tobias, R. (2003). *First chance for a real education: An impact study of adult literacy*. Wellington: Tertiary Education Commission.
- Boylan, H. (2002). *What works: Research based best practices in developmental education*. Boone, North Carolina: Continuous Quality Improvement Network with the National Center for Developmental Education.
- Bruch, P. (2002). Toward a new conversation: Multiculturalism for developmental educators. In J.L Higbee, D.B. Lundell, & I.M. Duranczyk (Eds.), *Developmental Education: Policy and Practice*, (pp35-44). USA: National Association for Developmental Education.
- Bruch, P., Jehangir, R., Jacobs, W., & Ghere, D. (2004). Enabling access: Toward multicultural developmental curricula. *Journal of Developmental Education*, 27(3), 12-19 & 41.
- Cantwell, R. (2001). *Learning theory for academics: An introductory model*. Teaching Guides, Learning and Development Unit, University of Newcastle.
- Cantwell, R., & Mulhearn, W. (1997). *The adjustment behaviours of mature-aged women returning to formal study*. Paper presented at AARE Conference, Brisbane. Retrieved August 8<sup>th</sup>, 2003 from: [www.aare.ed.au/97pap/cantr](http://www.aare.ed.au/97pap/cantr)

- Chung, C. J. (2001). Approaching theory in developmental education, in D. B. Lundell & J. L. Higbee (Eds) *Theoretical Perspectives for Developmental Education*. USA: University of Minnesota.
- Clough, P & Nutbrown C (2002) *A students' guide to Methodology*. London: Sage Press
- Collison, B. & Drayton, J. (2002). *How different target groups change the way we teach*. Paper presented at 2<sup>nd</sup> Conference of the New Zealand Association of Bridging Educators, Auckland. September 2002.
- Cole, M., John-Steiner, V., Scribner, S., & Souberman, E. (1978). *Mind in society*. USA: Harvard University Press.
- Conti, G.J. (1983). *Principles of adult learning scale*. Proceedings of the Adult Education Research Conference, no 24. Montreal: Concordia University/ University of Montreal.
- Crisko, V. (2002). Conflicting expectations: The politics of developmental education in California. In J.L Higbee, D.B. Lundell, & I.M. Duranczyk (Eds.), *Developmental Education: Policy and Practice*, (pp45-54). USA: National Association for Developmental Education.
- Crombie, W., & Johnson, D. (1998). Assessment for success in Maori-Medium primary schooling? *New Zealand Journal of Educational Studies*, 33 (2), 143-153.
- Davidson, C., & Tolich, M. (Eds). (1999). *Social research in New Zealand: Many paths to understanding*. Auckland: Pearson Education New Zealand.
- Day, F (2004). 'Of rainbows and reassurance. Why it is important to support LGBT students as they enter tertiary education'. *A paper presented at the 8<sup>th</sup> Pacific Rim Conference, First Year in Higher Education Conference*. Melbourne, 2004.
- Findsen, B. (1996). Developing educational programmes for adults. In Benseman, J., Findsen, B. & Scott, M. *The fourth sector: Adult and community education in Aotearoa / New Zealand*. Palmerston North: Dunmore Press.
- Findsen, B., & Harre-Hindmarsh, J. (1996). Adult and community education in the universities. In Benseman, J., Findsen, B., & Scott, M. *The fourth sector:*

- Adult and community education in Aotearoa / New Zealand.* Palmerston North: Dunmore Press.
- Findsen, B. (2002). Developing a conceptual framework for understanding older adults and learning. *New Zealand Journal of Adult Learning*, 30 (2), 34-52.
- Foley, G. (Ed.). (1995). *Understanding adult education and training.* Australia: Allen & Unwin.
- Freire, P. (1974). *Pedagogy of the oppressed.* New York: Continuum.
- Gee, J. (1998) *Learning academic social languages late.* Paper presented to the writing programme at Syracuse University. <http://wrt.syr.edu/gee>
- Gibb, J. R. (1960). Learning theory in adult education. In M.S. Knowles. (Ed.). *Handbook of adult education in the United States.* Washington: Adult Education Association of the U.S.A.
- Gillham, B. (2000a). *The research interview.* London: Continuum.
- Gillham, B. (2000b). *Case study research methods.* London: Continuum.
- Glaser, B.G., & Strauss, A.L. (1967). *The discovery of grounded theory: Strategies for qualitative research.* Chicago: Aldine.
- Glover, J. W. (2002). Developing online mathematics: Using policy, theory, and research to create a course. In J.L Higbee, D.B. Lundell, & I.M. Duranczyk (Eds.), *Developmental Education: Policy and Practice*, (pp101-112). USA: National Association for Developmental Education.
- Gore, J. M. (2001). Beyond our differences: A reassembling of what matters in teacher education. *Journal of Teacher Education*, 52 (2), 124-135.
- Goswami, U. (2001). Cognitive development: No stages please – we're British. *British Journal of Psychology*, 92 (1) 257 - 275
- Gough, D (2002) *Learning to Teach and teaching to learn...* Unpublished report, Christchurch Polytechnic Institute of Technology
- Harford, V., Morgan, J., & Watt, H. (2003). Connections: Educators – students – strategies. *Bridging education in New Zealand: Proceedings of the third conference of the New Zealand Association of bridging educators*, (pp75-86). Auckland: Manukau Institute of Technology.

- Higbee, J. L. (2001). The student personnel point of view in D. B. Lundell & J. L. Higbee (Eds) *Theoretical Perspectives for Developmental Education*. USA: University of Minnesota.
- Hopper Bader, C., & Jackson Hardin, C. (2002). History of developmental studies in Tennessee. In D.B Lundell, & J.L. Higbee (Eds.), *Histories of Developmental Education*, (pp35-45). USA: University of Minnesota.
- Irwin, K. (1994). Maori Research Methods and practices. *Sites*, 28 (Aut), 25 –43.
- Irwin, K. (2000). Academic freedom in New Zealand: The threat from within one's academic view. In Crozier, R. *Troubled times*. Palmerston North: Dunmore Press.
- Jacques, D. (2000). *Learning in groups* (3<sup>rd</sup> ed.). London: Stylus Pub.
- James, M (2004) Unpublished conversations with Margaret James, founder of the Foundation Education programme at Manukau Institute of Technology.
- James, M. and Rowsell, H (1996). *Foundation Education. The first decade*. Unpublished report. Manukau Institute of Technology.
- James, M. (1991). *A Report on Bridging Programmes and Learning Assistance in Britain, North America and New Zealand*. Unpublished Report. Manukau Institute of Technology
- Jarvis, P. (Ed). (1987). *Twentieth century thinkers in adult education*. USA: Croom Helm.
- Jarvis, P. (1992). *Paradoxes of learning: On becoming an individual in society*. San Francisco: Jossey-Bass.
- Jenkins, K., & Ka'ai, T. (1994). Maori education: A cultural experience and dilemma for the State – A new direction for Maori society. In Coxon, E., Jenkins, K., Marshall, J. & Massey, L. *The politics of learning and teaching in Aotearoa – New Zealand*. Palmerston North: Dunmore Press.
- Jones, A. (2001). Difference and desire: Dividing classrooms by ethnicity. *SET: Research information for teachers*,1, 29-32.
- Jordan, C., & McCardle, J. (2003). *Access to success: Virtual roads to education. Report to the Auckland Regional Council*. Auckland: Capital Strategy Limited.

- Lather, P. (1991). *Getting Smart*. New York: Routledge.
- Lundell, D. (1999). Collaboration and partnerships: Within and between disciplines, programmes and institutions. *Proceedings of the First International Meeting On Future Directions in Developmental Education*. USA: University of Minnesota.
- Lundell, D. B., & Collins, T. (2001). Toward a theory of developmental education: the centrality of discourse, in D. B. Lundell & J. L. Higbee (Eds) *Theoretical Perspectives for Developmental Education*. USA: University of Minnesota.
- Maharey, S. (Hon). (2002). Opening address to the 2<sup>nd</sup> Conference of the New Zealand Association of Bridging Educators, Auckland, 2002.
- McKenzie, K., & Schweitzer, R. (2001). Who succeeds at university? Factors predicting academic performance in first year Australian university students. *Higher Education Research and Development*, 20 (1), 21-33.
- McGivney, V. (1990). *Access to education for non-participant adults*. London: NIACE.
- McKegg, A (2003) *Mahi Ora : A new way to bridge* Paper presented to the 3rd Conference of the New Zealand Association of Bridging Educators, Auckland, 2003.
- McNae, D. (2002). Polytechnics in a 'postmarket' environment. *New Zealand Journal of Adult Learning*, 30 (1), 41-55.
- Merriam, S. B. (1998). *Qualitative research and case study applications in education*. San Francisco: Jossey-Bass.
- Mezirow, J. (1981). A Critical theory of adult learning and education. *Adult Education*, 32 (1), 3-24.
- Miller, K., & Gerlach, J. (1997). A study of student departure from developmental courses. *Research and Teaching in Developmental Education*, 13 (2), 1-13.
- Ministry of Education. (2002). *More than words/ Kei tua atu I te kupu. Adult literacy innovations 2002*. Wellington: Ministry of Education.
- Ministry of Education (2001). *New Zealand tertiary education sector. Profile and trends*. NZ, Ministry of Education.

- Ministry of Education. (2002). *Tertiary Education Strategy 2002/07*. Wellington: Ministry of Education.
- Ministry of Education (July, 2002). *Priorities: Interim statement of tertiary education priorities 2002/07*. Wellington: Ministry of Education.
- Ministry of Education (2004) *Learning for Living, Te Ako mo Te Ora, An update on Foundation Learning Issue 1* Wellington: Ministry of Education
- Morgan, J (2004) *Challenges for Educators in Meeting the Needs of Students Bridging into Tertiary Education*, Masters Thesis (unpublished), Auckland: Auckland University of Technology
- Moore, B. J. (1998). Situated cognition versus traditional cognitive theories of learning. *Education* (1) 161 – 171.
- Moore, R. (2002). The lessons of history: Transforming science to include developmental education. In D.B Lundell, & J.L. Higbee (Eds.), *Histories of Developmental Education*, (pp83-92). USA: University of Minnesota.
- Moore, R. (2002). The fates of developmental education students at two-year and four-year colleges. In J.L Higbee, D.B. Lundell, & I.M. Duranczyk (Eds.), *Developmental Education: Policy and Practice*, (pp55-64). USA: National Association for Developmental Education.
- Neuman, W.L. (1997). *Social research methods: Qualitative and Quantitative Approaches (3<sup>rd</sup> edition)*. Boston: Allyn and Bacon.
- OECD (2000), *Education at a glance. Education and skills*. OECD, Paris
- OECD (2000). *Definition and Selection of Competencies (DeSeCo): Theoretical and Conceptual Foundations Strategy Paper*. OECD, Paris
- Overton W F (1984). World views and their influence on psychological theory and research In W H Reese Ed *Advances in child development and behaviour* vol 18 New York Academic.
- Pacific Island Students Academic Achievement Collective (PISAAC). (2002). *Coconuts begin with a 'C': Pacific islanders at university*. New Zealand: University of Auckland.
- Piaget, J. (1975). *The development of thought*. Oxford: Blackwell.

- Pitkethly, A., & Prosser, M. (2001). The first year experience project: a model for university-wide change. *Higher Education Research and Development*, 20 (2), 185-198.
- Prebble T, Leach, L & Zepke, N (2003) *Integration and adaptation: Approaches to the student retention and achievement puzzle*. An unpublished selective summary paper of a best evidence synthesis of student outcomes literature. New Zealand. Massey University
- Rao, Z. (n.d). Bridging the gap between teaching and learning styles in East Asian contexts. *TESOL Journal*, 11 (2), 5-11.
- Rogoff, B. (1990). *Apprentice in thinking: Cognitive development in social context*. New York: Oxford University Press
- Rogoff, B., Mistry, J., Goncu, A., & Mosier, C. (1993). Guided participation in cultural activity by toddlers and caregivers. *Monographs of the Society for Research in Child Development*, 58 (8).
- Rudge, N. (1999). An explanation of practice: Why students withdraw from a bridging education programme. *New Zealand Journal of Adult Learning*, 27 (2), 56-70.
- Scribner, S., & Cole, M. (1981). *The psychology of literacy*. USA: Harvard.
- Shaw, M. E. (2002). Recovering the vision of John Dewey for developmental education. In D.B Lundell, & J.L. Higbee (Eds.), *Histories of Developmental Education*, (pp29-33). USA: University of Minnesota.
- Shor, I. (1986). *Culture Wars*. USA. Routledge.
- Singer, M. (2002). Toward a comprehensive learning centre. In D.B Lundell, & J.L. Higbee (Eds.), *Histories of Developmental Education*, (pp65-71). USA: University of Minnesota.
- Smith, G. H. (1990). "Research Issues relating to Maori Education", paper presented to NZARE Special Interest Conference, Massey University.
- Smith, G. H. (1997). *The Development of Kaupapa Maori: Theory and Praxis*. Ph.D. Thesis (unpublished). Education Department, University of Auckland.

- Stahl, N. (2002). Historical perspectives: With hindsight we gain foresight. In D.B Lundell, & J.L. Higbee (Eds.), *Histories of Developmental Education*, (pp3-6). USA: University of Minnesota.
- Statistics New Zealand. (2002). *Participation in Tertiary Education (August 2002)*. Wellington: Ministry of Education.
- Steele, M. (2002). Professional status for writing centre directors. In D.B Lundell, & J.L. Higbee (Eds.), *Histories of Developmental Education*, (pp59-63). USA: University of Minnesota.
- Tau, T., Ormsby, D., Manthei, M., & Potiki, T. (2003). *Treaty-based guidelines and protocols: For tertiary education institutions*. Dunedin: University of Otago Press.
- Taylor, D. V. (2002). Supporting the research mission. In D.B Lundell, & J.L. Higbee (Eds.), *Histories of Developmental Education*, (pp7-9). USA: University of Minnesota.
- Taylor, E.W. (1994). Intercultural competency: A transformative learning process. *Adult Education Quarterly*, 44 (3), 154-174.
- The University of Auckland (1999). Report of the Taskforce for Improving Participation in Tertiary Education.
- Tight, M. (1999). *Mythologies of adult/continuing/lifelong education*. Paper presented at SCUTREA, 29<sup>th</sup> annual conference, University of Warwick, England.
- Tinto, V. (1987). *Leaving College: Rethinking the causes and cures of student attrition*. Chicago: The University of Chicago Press.
- Tolich, M., & Davidson, C. (1999). *Starting fieldwork: An introduction to qualitative research in New Zealand*. New Zealand: Oxford University Press.
- Tolich, M. (n.d). *Pakeha paralysis: Cultural safety for those researching the general population of Aotearoa*. Palmerston North: Massey University.
- Trewartha, R. (1993). *Feminist/Lesbian Pedagogy: A Postmodern Approach to the Struggle for Democracy*. MA Thesis (unpublished). Education Department, San Francisco State University.

- Trewartha, R. (1999). *Developments in bridging education for Maori*. (Unpublished paper). Auckland: Foundation Studies, UNITEC.
- Trewartha, R., & Coltman, D. (2002). *Non-completion-students' perceptions: A report of research in progress*. Paper presented to the 2<sup>nd</sup> Conference of the New Zealand Association of Bridging Educators, Auckland, 2002.
- Trewartha, R. (2000). *Developments in bridging education for Maori*. (Unpublished paper). Auckland: Foundation Studies, UNITEC.
- Tuhiwai - Smith, L. (1999) *Decolonizing Methodologies*. London : Sage.
- Tuhiwau – Smith, L. (1995). "Recentering Kaupapa Maori Research" paper presented at Pe Matawhanui Conference, Maori Studies Department, Massey University.
- Vygotsky, L.S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge: Harvard University Press.
- Wambach, C., & Brothen, T. (2002). The general college base curriculum: Description, historical antecedents, theoretical structure, and evaluation outcomes. In D.B Lundell, & J.L. Higbee (Eds.), *Histories of Developmental Education*, (pp73-81). USA: University of Minnesota.

**Note to readers of this thesis:** In June 2003 I purchased a copy of Hunter Boylan's *What Works. Research Based Practices in Developmental Education*. I have used this publication extensively throughout this thesis and have also been recommending it to other Bridging Educators. At some stage I have lent this book to someone, but not kept a record of who. I have performed an exhaustive inter-loan search for the publication in Australia and New Zealand without success. I have ordered another copy of the book which will unfortunately not reach New Zealand until April 2005. As a result many of the quotes taken from this publication are not correctly referenced in this thesis, in particular no page numbers are included. I will be updating the document once the book arrives and am happy to make an updated copy available to you. Please contact me electronically at : [davidwc@xtra.co.nz](mailto:davidwc@xtra.co.nz)

