

AS PROUD AS WE ARE: A JOURNEY OF EDUCATIONAL ACHIEVEMENT AND LEARNING FOR MATURE MAORI COMPUTING STUDENTS

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ABSTRACT

In recent years New Zealand has seen an upsurge of mature adult Maori students who have returned to full time studies either at a University, Waanga or Polytechnic tertiary institutions. The Waikato Institute of Technology is one such institution that has seen a phenomenal growth of mature Maori students returning to study. This tertiary institution provides a wide range of qualifications across the disciplines of business, industry, commerce, technology and the arts. Much has been written in recent years of Maori who have returned to full time study. However, the literature is very sparse on indigenous students who have successfully completed a computer degree. This study explores the experiences of some of these adult students who have graduated with a Bachelor of Information Technology Degree (BIT) with an insight to understanding how they have all become academically successful in a discipline which is predominantly seen as non-Maori orientated.

Key words Indigenous, mature Maori, computer education, tertiary studies,

INTRODUCTION

The origins of the Waikato Institute of Technology lie with the Hamilton Technical College which was founded in 1924 to provide largely technical and trades training in the Waikato region. In 1968 the institution became the Waikato Technical Institute aiming to provide “vocational training for farming, industry and commerce”. In 1987 the name was changed to The Waikato Polytechnic to reflect the increasing scope of its educational activities. During the 1990’s the institute developed a range of degrees in nursing, midwifery, business, sport and exercise science, information technology and media arts in response to changing employment needs.

The strong practical aspect of these degrees supported the long-standing and successful trades and technology reputation of the institute. In 2001 the name was changed to the Waikato Institute of Technology with the Wintec brand being adopted in 2003. The institute’s reputation as a leading provider of high quality applied, vocational and professional qualifications in the greater Waikato region, continues strongly.

The Waikato Institute of Technology has many mature Maori students (Maori are the indigenous people of New Zealand) who have returned to full time studies. There are many stories that have been shared, both good and bad that many of these students have had whilst attending full time studies. There is much anecdotal information about the pressures, issues and lifestyle circumstances that all students have to negotiate to attend and complete tertiary studies. Financial support, family commitments, travel, course fees and material requirements, finding time to study all these external hurdles must be overcome to achieve success.

This paper explores the experiences of some of these adult students who have graduated with a Bachelor of Information Technology Degree (BIT) from the Waikato Institute of Technology with an insight to understand how they have all become academically successful. This research will look at the participant’s experiences, their motivation and drive for attending WINTEC in the view of succeeding, specifically in the Information Technology field.

As educators at the Waikato Institute of Technology this is important if we are to improve the situation for future adult Maori students who wish to study Information Technology. This research will highlight the support systems that were used by Maori participants in this study and will cover in some detail the challenges that they experienced while studying in a Polytechnic environment specifically computing. In summary, this research is a qualitative case study into the experiences of academically successful IT adult Maori students.

BACKGROUND

For the last nine years I have watched numerous IT graduates walk the graduation stage to receive their degree. Each of these students has a story to tell and most would say that their journey through education was neutered at a young age. They had good schooling experiences, education was fostered in the home at an early age and the notion of “if you are to succeed in life then go and get an education”. Some of these students that I’ve seen enter with very high entry qualifications and others with industry based experience. High family expectations are also the norm. One way or another they are numbered as one of those who have graduated with our Bachelor of Information Technology Degree.

However, there are the exceptions. I notice waiting to the side of the stage a Maori girl dressed in a beautiful Korowai (feathered cloak) who will soon proudly walk the graduation platform to be capped and to receive her degree. Her story unlike the rest of her peers bears little resemblance of anything to do with a successful and encouraging early childhood education. For those who have seen the New Zealand movie “Once Were Warriors” it portrays a story of the Heke family and also similarities to this student’s upbringing. Family violence is the norm, nightly drinking parties are common and the children’s education is that learnt off the streets of South Auckland. This film portrays the harsh realities of some of our Maori families who live in urban areas in New Zealand.

That’s why I take an interest in this student. From her humble upbringing to where she now stands proudly with her Tohu (Degree) in one hand and her other hand placed proudly over her heart. She is one of those who have broken that stereotype of not being one of the dismal stats of Maori under achievement.

The idea for this research topic came from a conversation I had with one of my former students who was a mature Maori student coming to the end of his studies. I was interested in his story because unlike many other students who had the support of family and friends, he had very little. He was discouraged to attend studies and that he should join the rest of the Whanau (family) at the local meat works. As I listened to his story, I wondered why a mature student like himself would want to complete a computer degree. Computing was not one of the easiest courses to undertake and pass.

My interest in finding an answer to this question arose when I was appointed the Maori and Pasifika liaison support member to the School of Information Technology. This position enabled me to work with a lot of Maori and Pasifika students and through my discussions I came to realize that my student’s story was not that uncommon among many of our mature students. There were a number of Maori students who were pursuing an IT degree whose backgrounds that they came from would also make a good sequel to “Once Were Warriors”.

Differences in Universities, Polytechnics and Wananga

Maori participation in tertiary education continues to steadily grow as compared to non-Maori. Sovka (2002) adds that,

“Maori school leavers who attend tertiary institutions ...were more likely than other students to choose polytechnics. In fact, half (50%) of Maori school leavers choose polytechnics” (Sovaka, p. 609).

Middleton (2006) notes that,

“While there is some over-lap in the courses and programmes offered by the different types of tertiary education providers in New Zealand it is fair to describe the different institutions as having the follow characteristics:

- Universities have a focus on higher or degree-level and postgraduate courses and programmes supported with significant levels of research;
- Institutes of Technology or polytechnics have a focus on technical and vocational education with a focus on applied research and employment ready graduates;
- Wananga offer a range of programmes targeted at the needs of Maori and Maori development with significant focus on Maori language.”

Middleton best sums up how the Polytechnic sector in New Zealand is centered on providing quality applied and vocational education for a wide range of qualification and in a wide range of settings including work-based and in partnership with business, industry and commerce.

Entry requirements into WINTEC computing studies

In order to gain entry into our introduction Certificate IT courses students are required to have gained 12 Credits in NCEA Level 1 or a C grade in School Certificate, either of which in one of English, Maori or Mathematics, or the equivalent in Unit Standards, and be able to demonstrate the motivation and skills to succeed in the programme.

If they choose direct entry to the Bachelor of Information Technology degree level candidates must have gained the award of the Certificate in Computing and Information Technology (CCIT) or be granted entry at the discretion of the Head of School or authorised nominee. Candidates can also gain entry if they have previously gained the award of the National Diploma in Business Computing.

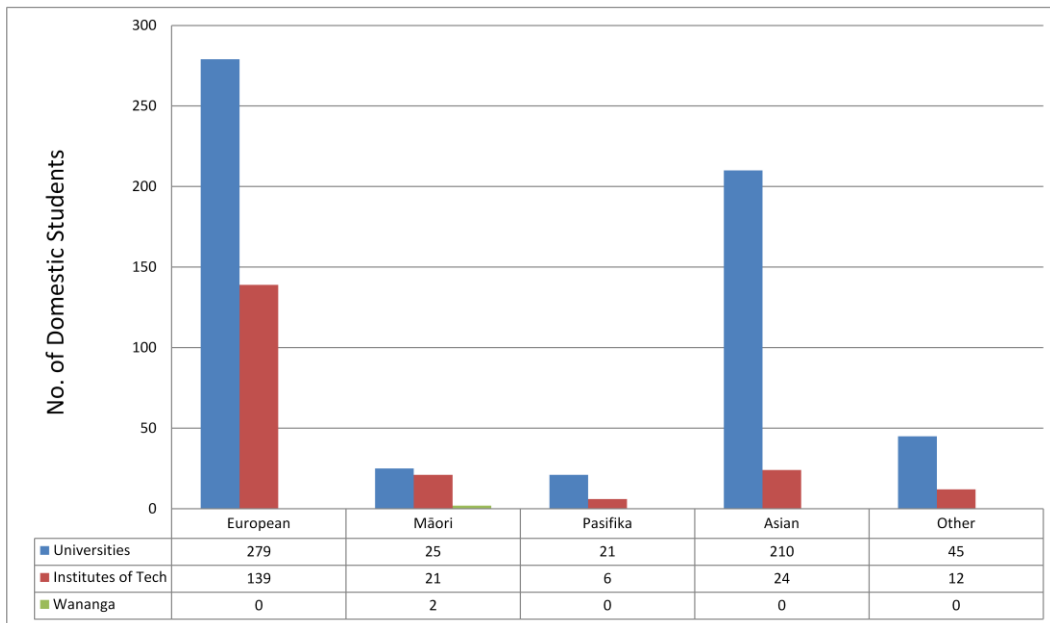
So where does it leave those who don't meet the entry criteria?

Those candidates who do not meet the above entry requirements may nevertheless be considered for provisional entry (if aged under 20) or special admission (if aged 20 or over). In such cases entry will be dependent on whether candidates demonstrate a reasonable likelihood of success in the programme. This is how many of our mature students are able to gain entry into our BIT course.

There has been research on Maori students experiences as an adult student attending University.(Clothier, 1993; Selby, 1996; Jefferies, 1997; Simpson, 1998; Tiakiwai, 2001) but the literature is very sparse on mature Maori students who have studied and completed any form of Information Technology or Computing degree in any tertiary institution in New Zealand.

National Statistics.

Domestic students completing a Bachelor of IT by Ethnicity and Institution for 2008



www.educationcounts.govt.nz

Modules for BIT

There are numerous IT papers that are offered that one must complete in order to gain their Bachelor of Information Technology Degree. Below are lists of papers that are on offer to students in order to complete their Degree.

Level 5	Module Title	Credits	Level
ITB5100	Fundamentals of Information Technology	15	5
ITB5105	Mathematics for Information Technology	15	5
ITB5110	Communication for Information Technology	15	5
ITB5120	Introduction to Systems Analysis Design and Implementation	15	5
ITB5125	Introduction to Databases	15	5
ITB5130	Introduction to Programming	15	5
ITB5131	Intermediate Programming	15	5
ITB5145	CISCO - CCNA	15	5

Level 6	Module Title	Credits	Level
ITB6210	Information Technology in the Business Environment	15	6
ITB6220	Object Oriented Analysis and Design	15	6
ITB6225	Intermediate Databases	15	6
ITB6230	Data Structures and Algorithms	15	6
ITB6235	Programming Operating Systems	15	6
ITB6245	CISCO CCNA 2	15	6

Level 7	Module Title	Credits	Level
ITB7301	Project All compulsory level 5 and level 6 modules	45	7

Group B (elective Information Technology modules)	Module Title	Credits	Level
ITB5150	Mechatronics	15	5
ITB6227	Web Programming for e-Commerce	15	6
ITB6233	Multimedia for the Web ITB	15	6
ITB6246	CISCO CCNA 3	15	6
ITB6247	CISCO CCNA 4	15	6
ITB7305	Artificial Intelligence	15	7
ITB7310	Introduction to Research Methods	15	7
ITB7321	Information Systems Management	15	7
ITB7323	Decision Support Systems	15	7
ITB7325	Advanced Databases	15	7
ITB7326	Database Administration	15	7
ITB7327	e-Business Systems	15	7
ITB7330	Professional Programming Practice	15	7
ITB7331	Games Programming	15	7
ITB7334	Advanced Multimedia	15	7
ITB7336	Data Visualisation	15	7
ITB7337	Games Programming I	15	7
ITB7338	Games Programming II	15	7
ITB7345	Advanced Network Technology	15	7
ITB7350	Project Management	15	7
ITB7380	Special Topic: Current Developments in IT	15	7

OBJECTIVE

Research often overlooks the experiences of many mature Maori students who return to full time study in Polytechnics and who experience considerable success.

Therefore this research will then be guided by this question. *“What are the drivers for mature IT Maori students to succeed in a discipline that is pre-dominantly non-Maori oriented?”*

For this researcher the objective of this study is a way to acknowledge and recognize their achievements in a pre-dominantly non-Maori field of study. It will also acknowledge that through hard work and determination they have succeed and broken the IT barrier to success. So what is the significance of this research and how will it

add value to a subject that very little is written about if any? The significance and impact that this research has for Maori will be discussed following.

SIGNIFICANCE

A large number of studies have demonstrated that Maori are not performing as well as they should be in education. (Else, 1997). Even more so numerous studies on strategies to retain and recruit Maori students to higher education are documented. (Te Momo, 2003). The literature in the general area of Maori education portrays a picture of high failure and underachievement.(Bishop & Glynn, 1999; Clothier, 1993; Selby, 1996; Smith, 1999).

What really inspires me to do this research is that it will provide a ways and means of telling each students story of how they have succeed in a difficult field of learning and with that, the old adage that goes, "If I can do it so can you". It is hoped that these untold stories can motivate and inspire those that no matter what you put your "mind to you can succeed." Besides adding to the literature in a range of important areas, this research is even more significant because it aims to inform our Department policy and practice, particularly with respect to the support systems for Maori students undertaking studies in Information Technology.

SAMPLE SELECTION

Participants who are known to the researcher through personal contacts where approached and asked to participate in this research. 5 participants where informed via face-to-face (kanohi it e kanohi) or telephone contact with the researcher. Participants will be selected from a range of criteria including:

- Identifying themselves as Maori
- Be over the age of 20 at the start of their studies
- Be enrolled either as full time or part time students
- Have gained a Bachelor of Information Technology Degree from the School of Information Technology.

RESEARCH METHODS

It was decided that the qualitative, rather than the quantitative approach be more suitable to this research. This research methodology must allow the participants to share their experiences. A qualitative research approach is best considered and the most appropriate in this regard. Merriam (1998) notes that, "...that this inquiry helps us to understand and explain the meaning of a social phenomenon with as little disruption of the natural setting as possible". (Merriam, 1998, p.6).

The qualitative research framework that will guide this study is that of a *case study* approach which focuses on people's experiences, feelings and their behaviour in a familiar environment.

Case Study

Case studies in education are a useful explanatory tool as they serve to make unfamiliar familiar through a rich description of a context, the people involved, the documentation, etc. This is particularly relevant when the case being studied is a '*real life*' phenomenon (Yin, 1984).

The purpose of using case studies for this research becomes apparent when it is recognized that the Maori population is not a single homogeneous group and that there is considerable variance within this ethnic group. (Simpson, 1998). When using the case study approach a researcher must ensure that the confidentiality of each participant is respected. The researcher must also make sure that there are no descriptions in the final report that may disclose the identity of individual participants.

Instrumentation.

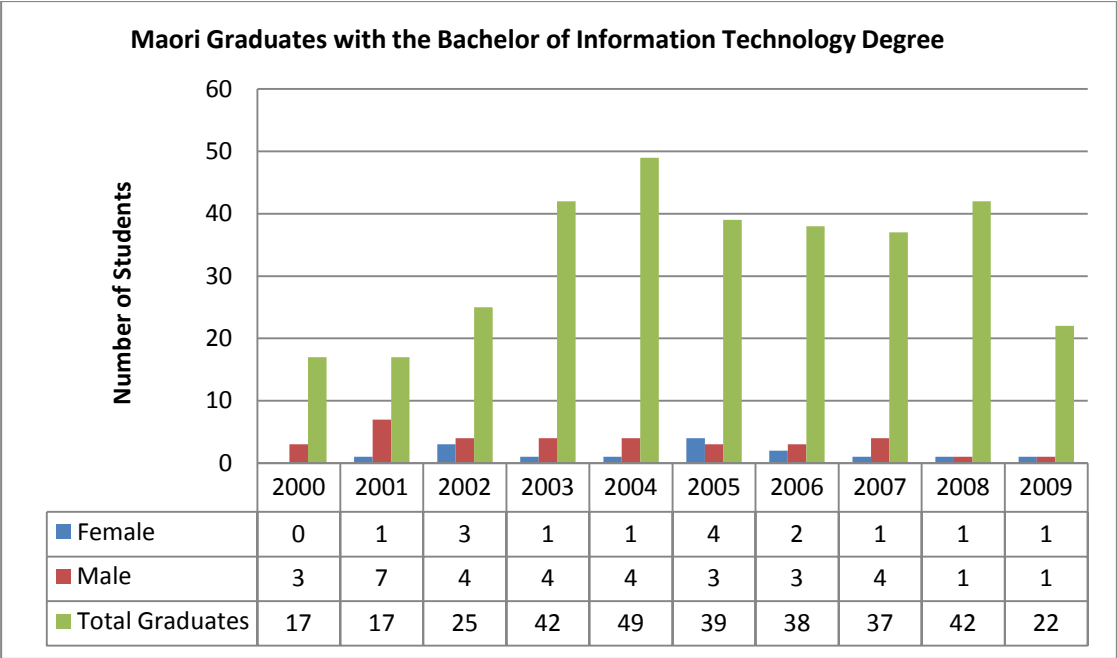
Interviewing is probably the most common form of data collection in qualitative research which at one spectrum can be formal and at the other informal where the interviewee has complete autonomy on how the interview is conducted. (Merriam, 1988, p.71). This study will use a *semi-structured interview* method as the main method of data collection. Semi-structured interviews are conducted with a fairly open framework which allow for focused, conversational, two-way communication.

This is important to Maori as the term Kanohi ki te Kanohi or face-to-face meeting between the participants and researcher is required. When the participant and researcher are available to engage in an interview using a kanohi kitea (face-to-face) approach and applying whakawhanaungatanga (getting to know each other) there is an exchange of cultural values and socializing. (Bevan-Brown, 1998) acknowledges that such a framework would be seen “from a Maori world view, be based on Maori epistemology and incorporate Maori concepts, knowledge, skills, experiences attitudes, processes, practices, custom, reo, values and beliefs” (Bevan-Brown, 1998, 231). In doing this it will allow the participants the opportunity to meet the person conducting the interview and to form some human attachment and familiarity. Therefore the interview process using face-to-face interviews will be the instrument in collecting this data. How this data is to be collected is outlined below.

Data Collection

The case study approach will be used to collect qualitative data which consists of “direct quotations from people about their experiences, opinions, feelings, and knowledge obtained through interviews” (Merriam, 1988, p.78). A series of questions to prompt the participant will be given during the interview process.

Maori students who have completed their BIT Degree at WINTEC



Graph 1.1 Maori graduates with the Bachelor of Information Technology Degree

The number of graduates with their Bachelor of Information Degree in particular Maori (refer to graph 1.1) shows that over the last 3 years there has been a steady decline of Maori graduates. Noticeable is the fact that very few Maori women graduate. Crump & Logan (2000) notes that “Australia and New Zealand suffer the same problem in attracting and retaining female students to computer science and information technology courses.” (Bradley, 1998; Ryba & Selby, 1995; Selby, Ryba & Young, 1997).

FINDINGS

Here are just some of the drivers to their educational success and have been placed in no particular order. Though the first point would rank as being high on the list.

- Mana tohu matauranga (Honour): A lot of external expectations were placed on the students from the Hapu, Iwi and whanau to do well in their studies. Some of the students were financially supported from their Iwi and felt an obligation to their iwi to succeed. They were also to bring honor and respect to ones marae in their achievements.

- Panekiretanga (Pinnacle of Achievement): Many felt that the pinnacle of achievement was to complete their degree regardless of all the adversities that they were faced with. Such adversities were financial pressures, family pressures, Tertiary readiness. Pride was what drove them to succeed, being told by tutors that they could do it and where doing well.
- Koretake (Useless): Having been told that they were useless, dumb and thick these labels stuck with them but these labels provided the motivation for them to complete their studies. Such labels were seen to be derogative and demeaning and completing this degree would help to remove such labels.
- Murau (Example) The greatest leader is one that leads by example. The greatest parent is one that teaches by example. Whanau is important and for many of these interviewees with children they felt that as a parent showing their children good study habits would help their children to further their education on the paths to academic success.
- Pohara (Poverty) Education was seen to be the vehicle for many to break the poverty cycle. Completing their degree would provide them better job prospects and opportunities that would provide them with a better lifestyle for them and their family.
- Hunga mahi (Laboring jobs) Laboring jobs were entrenched and engrained in many of the families of the participants that I interviewed. Sharing, Forestry, farming and the meat works were back breaking and laborious jobs. Parents spent long hours away from the family and it was left up to some of the participants to take care of their younger siblings. They didn't want this to happen to their children.

CONCLUSION

Though I have named a few of these drivers and time does not permit me to discuss the rest I believe that these drivers not only apply to our Maori people but also to all cultures. You see as an educator this puts in to perspective for me the different baggage's that many of our students carry. If I can be more understanding, a little bit more patient and indeed more encouraging to my students not only to Maori then perhaps the statistics for Maori IT graduates can improve.

E nga mana, e nga waka, e nga reo, e nga hau e wha, Tena koutou, tena koutou, tena koutou katoa.

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