



Ngā Wāhine Maori o BCS: Kanohi ki te kanohi

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ABSTRACT

Much has been written in the past decade of the falling numbers of women entering and completing Information and Communications Technology (ICT) related courses and then staying in the industry. However the literature is very sparse on indigenous women and their representation in this field. This exploratory study identified the Maori women in a computing degree programme and using focus group sessions discussed their perspective, difficulties, achievements and ambitions for their ICT degree and future in the industry.

1. INTRODUCTION

Over the past few years it has been observed that there is a decreasing number of women entering and completing qualifications in Computing and Information Technology (CIT). (Selby *et al.* 1997). This trend is also true of the Bachelor of Computing Systems (BCS) at UNITEC in Auckland. The BCS was approved in 1996 and commenced in 1997 with most students cross crediting from the previous national qualifications.

The three authors were all concerned with the number of women, in particular the number of Maori women, enrolled in the BCS degree programme. The concept of an investigative research project to identify issues about Maori women was discussed. It was identified that there were numerous issues to investigate: the recruitment of Maori women students, currently enrolled Maori women students and the retention and support of Maori women in the degree programme.

As this was also identified as a very large field of study it was decided to start with a small investigative study to identify if there was a need or direction for this type of research. It was very important, to the extent possible, that "there was no hierarchy between the 'researcher' and the 'researched'" (Bishop, 1996) and the research sessions were culturally comfortable and all participants would own the research. Both the Head of Puukenga and the UNITEC Research Coordinator were consulted and advised on direction for the investigative study.

The focus group meetings were held, the resulting stories were written, then returned to the participants for comment and endorsement. The findings were surprising, enlightening and insightful.



2. RATIONALE

To begin this investigative study we first identified the students currently enrolled in the Bachelor of Computing Systems (BCS) at UNITEC who identified themselves as female and Maori on their application and enrolment forms. It is interesting to note that the only time this data is captured is on the initial application form and not on subsequent re-enrolment forms. Therefore there could be more students who are female and identify as Maori but were not captured in the enrolment system or who are of Maori descent but consciously chose not to identify themselves as Maori.

There were six students that met the reporting criteria, female, Maori and currently in the BCS programme. At the time of the last census Maori made up 14.5% of the New Zealand population (Statistics NZ, 2002) and 14.2% of polytechnic students identify as Maori. At present there are approx 620 students enrolled in the BCS programme, approx 130 or 20% of them are female. Maori women make up 15% of the New Zealand female population (Statistics NZ, 2002) therefore we should expect 15% of the 130 would identify as Maori, which would be approx 19 Maori women. Our query identified six Maori female students enrolled in the BCS, this is less than one third of acceptable representation levels.

Given these small numbers we decided to use a focus group to discuss our objectives and collect the information we required to form some research questions. The authors also felt that this was the most culturally acceptable environment for the participants and the information could be gathered in the mode of "interviews as conversations" (Bishop, 1996). It was also felt that the desired approach "was to allow for a multi voiced construction of meaning in a manner that promoted self-determination by the research participants through a process of power sharing" (Bishop, 1996).

The students were contacted and were invited to attend a focus group meeting with the authors. At the first meeting it was made clear that any participation was voluntary and anonymous and they had the opportunity to withdraw at any stage. It is pleasing to note that all four women who attended the meeting were keen to participate and very pleased to contribute to a research project that was relevant to them personally.

At the focus group meeting, over a shared meal, the authors had a semi structured set of questions to start the discussion.

The responses from the four participants, using pseudonyms of their own choosing, are expressed below in the form of summarised personal stories.

3. HIRA

The first student, Hira, is a school leaver who is living away from home for the first time. When she was in her seventh form year she decided she wanted a career in computing as computer studies was her strongest subject. She sought advice from her careers counsellor who provided her with information about our degree programme even though it was in a different part of the country.

She then attended an open day with a friend where she talked to one of the authors about the BCS and decided that this was the qualification and career path for her. To maximise her chances of acceptance onto the degree programme she applied for a one semester certificate course for which she had the necessary entry qualifications.

Hira found the certificate course more interesting than her seventh form year had been, as she was able to study in the information technology (IT) field that she had enjoyed and in which she had succeeded, in her sixth form year. It also enabled a smooth transition into the degree programme as she had made friends in the certificate course who progressed with her to the degree.

She is now in her first semester of the BCS and is passing her assessments. She didn't experience any difficulties in the enrolment process. In her first semester degree class Hira is one of two female students in a class of 24. At the beginning this caused her some self consciousness but didn't prevent her from continuing her studies.

Hira also talked about the very strong whanau support who said "go for it", her mum and dad were her greatest influence and encouraged her to get out and see the world.

4. IRIHAPITI

The second student, Irihapiti, is a mature student who has a partner and a young family. She has relocated to Auckland and was able to continue her

studies by cross crediting previous courses from another tertiary institution. When Irihapiti went back to work after having her children she found the work mundane and decide to embark on studies to enhance her career opportunities. She had enjoyed computer studies at school and also worked with computers in her job and therefore investigated education providers in the field of IT.

Once Irihapiti had decided on her course of study she completed her application but was put on a waiting list. However as she was keen and enthusiastic she contacted the institution on a regular basis. Her persistency paid off and she was finally accepted. Since then Irihapiti has transferred to the BCS degree and is in her final year. Her main difficulty in her study is time, especially when required to do group work and meet with other students, around her active and busy family life.

Irihapiti's main influence was her mother who went back to study when Irihapiti was still at primary school. Her mother completed secondary and tertiary qualifications while bringing up a family as a solo parent.

Irihapiti's supportive partner encourages and helps her by contributing to family commitments.

4. MEI

Mei is a mature Maori woman whose secondary school education was in an era that encouraged young women to learn and develop strong domestic service skills. This institution offered no encouragement to young female scholars to learn in other areas like the field of communications or technology. This school did not have PC's so she did not have the interaction of computers at secondary school nor in her every day life that exists today

Mei survived her secondary school education and raised her family but wanted to learn more to help her children thrive and succeed with their own education, in an environment with more opportunity and flexibility than she had experienced. She embarked on a training course at a local private training establishment (PTE), which helped her gain strong computing user skills suitable for office administration work. She found this course made her want to learn more, especially with multimedia and visual work in computing.

Mei then approached UNITEC to enrol in a professional computing programme. After she

successfully passed a short maths and reasoning test she was accepted into a bridging programme as she had already met other entry requirements with her previous studies. Once she passed the test she embarked on this six month programme of study which was in a male dominated class. This provided her with motivation to achieve higher grades than her fellow young male colleagues. This also helped her confidence and has encouraged her to continue her studies at degree level.

While Mei maintains a strong focus on her role as a mother and a family member she admits that often the biggest obstacle is not being able to identify a niche in learning until she undertakes a particular course of study.

The incentive for Mei to study and succeed in the I.T. field is strong, as it will provide well paying employment, which in turn will provide a stable secure career for a working mother and her family.

5. ERENA

The fourth student, Erena, is a vibrant and outgoing student who returned to study when she decided she wanted to better her life. Erena was influenced to enter the IT industry by media interest and publicity. As she now understood the value of education she enrolled at a regional polytechnic where she completed several computing national qualifications. She also perceived that a computing qualification would give her a sense of security for her future.

Erena moved to Auckland and after working for some time decided again to return to study. She noticed a newspaper article advertising a 'solo mother going nowhere' which profiled a Maori woman who had completed a computing degree at UNITEC. Erena investigated her options and enrolled in the BCS programme. She had no problems with the enrolment process and was able to cross credit many of her previous studies.

Erena never doubted her ability to complete the BCS programme however she knew to succeed she was going to have to time manage her workload better than she had done in the past. Erena has always focused on graduating and will complete her degree in the near future.

Erena uses a support centre at UNITEC called Maia, which is specifically for Maori students and finds that between her friends and Maia she has the resources to support her.

6. FUTURE STUDY

The issue of falling number of women in IT has been investigated and reported on for the past decade. In this initial investigation we have met with Maori women who have made a conscious decision to further their study and have chosen a career in IT. It seems that to progress a study into the low numbers of Maori women in IT, it would make sense to talk to women who chose IT but were unable to enrol for whatever reason, lack of entry requirements, lack of confidence, difficulty with the enrolment process. It would also be useful to talk to young Maori women who as yet have not made a career choice and make sure that they know about careers in IT so when they do decide to further their study it is a well informed decision. We also need to investigate Maori perceptions of IT and understand why IT has not been a choice in the past.

UNITEC is committed to Maori education and development and have an agreement, The Partnership, Te Noho Kotahitanga.

To further support Maori women, a society for professional Maori women in IT, Te Wairere Wahine, has been founded. This society 'endeavours to support Maori women who currently work in IT, or who wish to become IT professionals' (www.pauainterface.co.nz)

7. CONCLUSION

When we started this exploratory study we envisaged that this could be the very beginning of a much wider and broader research project. The relatively low number of Maori women enrolled in the degree programme presented its own challenges for investigation. The women that participated in the study all had strong whanau support, were self motivated and determined to succeed. None of them had experienced any difficulty in finding out about the courses in IT that were offered, nor did they experience any difficulties in the enrolment process. As students in the course none of them showed a lack of confidence in the male dominated classroom environment. All the women also expressed interest in post graduate qualifications, although doctorates seemed a long way in the future.

UNITEC provides support for Maori students with its unique innovative Maori development centre, Maia and also the student learning support centre Te Tari Awhina.

From the focus group meeting held with these women it was very obvious to the authors that they were meeting with four very focussed, strong intelligent women. It was a humbling experience to be able to talk with them and the authors would like to acknowledge their thanks for their openness and willingness to share their experiences and thoughts. They will surely be the role models of the future young men and women that decide on a career in IT.

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