Making the Transition - Computer Studies in Year 13 at Burnside High School: A Case Study

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ABSTRACT

This paper describes a process that provides a transition programme for senior high school students towards tertiary study in a vocational institution in preparation for a career in information and communications technology. The paper examines the case study of the introduction of this pilot project and follows the experiences of a cohort of students.

Keywords: Transition, education, tertiary, study

1. INTRODUCTION

The author first became involved with transition education in 1983, when the then New Zealand Department of Education established a special Transition Unit, but it was disbanded only ten years later and Transition Education staff was removed from Secondary schools throughout the country. The Government funding available under the Transition Education policies became in a more limited fashion the basis for the current STAR Funding, or Secondary Tertiary Alignment Resource.

New Zealand is not alone in the concern over transition education. The Organisation of Economic Co-operation and Development (OECD) have long been interested in this matter. In Australia, as far back as 1974, the Whitlam government commissioned an OECD educational policy review on the theme of the transition from school to work and further education. "The notion of transition education was a term that in the 1970s became associated with programs focusing on links between school and work and was often decried as narrowly vocational and as a band-aid for keeping reluctant school stayers out of trouble during periods of high youth unemployment." (Taylor, Autumn 2000).

While the Technical and Further Education programme (TAFE) is now one of the few areas still actively involved in what the Australians called "transed" the OECD is still concerned with the issue on a world-wide basis - even more so it seems, with the additional factor of ICT. A recent OECD report (OECD, November 2001) mentions that enormous investments are being made in computers for schools and the aim is to provide high-quality learning and teaching and equip young people for the knowledge society.

The report continues by asking how are the benefits of this educational investment to be realised? It is suggested that this investment calls for much more

than installing the hardware, and is not simply a matter of using ICT to do traditional things in different ways.

"Schools have to learn to change and to change to new ways of learning. Teachers - and students - must become discerning and knowledgeable ICT users. The school environment has to be fully supportive of ICT, making available expert assistance and advice to the teacher in this rapidly-changing field. New forms of curriculum and assessment are called for, new ways of organising schools, if the dramatic educational potential of ICT is to be delivered and realised." (OECD, November 2001)

Although transition education is no longer formally supported in New Zealand, a recently revised and gazetted National Administration Guideline (NAG1, November, 2001) requires that each School Board of Trustees, through the principal and staff ... (Section vi) "provide appropriate career education and guidance for all students in year 7 and above, with a particular emphasis on specific career guidance for those students who have been identified by the school as being at risk of leaving school unprepared for the transition to the workplace or further education/ training."

Also, a recent study (Evans 2000) suggests that poorly managed transition from secondary level education to tertiary study is a major causative factor in poor student retention. Evans says that transition problems can be devastating for individuals and their families, and can result in enormous social and economic waste and that a 1997 study by the Higher Education Funding Council for England (HEFCE) estimated the direct costs to taxpayers of higher education non-completion to be about 90 million pounds a year.

Parallel to these matters is the concern over competition with universities for catchment of school-leavers in the transition to tertiary study. A recent survey into school leavers career and tertiary education choices (Boyd and Chalmers, 2001) shows that the most common pattern of both intentions and actual activities for these students was to leave school after year 13 with an A or B Bursary to study for a degree at a university. It means that university is a default choice, leaving academic programmes at polytechnics possibly left out in the cold.

This would certainly appear to be the case at Christchurch Polytechnic Institute of Technology (CPIT) in that while Burnside High School has over 400 Year 13 graduates each year, only three Burnside students are known to have enrolled in DipBC courses in the past five years.

2. BACKGROUND

In 1999, CPIT began negotiations with Burnside High School to address the issues of transition to tertiary study at CPIT, assisting with school-leavers being better prepared for study at CPIT, and giving students the opportunity to explore further pathways to tertiary study, apart from the traditional pathway of Year 13 students consistently making their way automatically to the University of Canterbury.

Burnside High School, with a student roll of almost 2,500, is one of the three largest schools in New Zealand, and by far the largest in Christchurch. Burnside High, a decile 10 school, has traditionally steered its brighter students to the University of Canterbury, located only a few streets away, with many Year 13 students taking first year papers at Canterbury in preparation for continuing their studies at that institution.

After issues of staffing and resources were resolved, it was established that suitably qualified Burnside High School teaching staff would deliver the content supplied by CPIT academic staff with supervision and moderation carried out by CPIT. Late in 2000, 13CIT was offered as a STAR (Secondary and Tertiary Alignment Resource) funded option and there were sufficient enrolments to make two streams of up to 15 in each class.

Three NACCQ Diploma in Business Computing (DipBC) papers, HF100 Hardware Fundamentals, SF100 Software Fundamentals and SP190 IT Tools Intermediate A, would be resourced by CPIT staff, and taught by appropriately trained and qualified Burnside High teachers. The two staff members would spend their Christmas Holidays of 2000 reading up on the CPIT teaching and course materials for the three NACCQ Blue Book papers.

The 2001 school year began and the author was present at each new class to launch the HF100 course and inform the Burnside students of how the course would be run - with CPIT course content and assessment and CPIT rules about pass marks, assessment and resit or resubmission requirements. The author then attended the two classes on a

Thursday afternoon as often as possible for the rest of the year.

A total of 26 students (15 males and 11 females) had originally enrolled in the course and 18 students (10 males and 8 females) were still attending by the end of the year. HF100 was the first paper to be completed, and 23 of the students passed (a mark of 80% or greater), one of them with a Merit Pass (95%). SF100 was the second paper completed, and 24 of the students passed, 11 of them with a Merit Pass. SP190 was the last paper to be completed, and 18 students passed, 9 of them on a resit or resubmission of some of the assessment. (It is believed by the author that the Secondary Teachers strikes held during Term 4 of 2001 had a major impact upon the students, resulting in the lower level of achievement.)

During the year, the author was able to speak on almost a one-to-one basis to each of the Burnside students; talk about the courses they were doing, their progress in these courses, and what their plans might be for 2002. Most of the students were unaware of the programmes and qualifications offered at CPIT, and much of the talk centered around this. By the end of the year, it was believed to be such a success with all concerned - the Burnside senior staff, the teaching staff, the students and CPIT, that a questionnaire would be given to the students to more accurately gauge the nature and extent of this success.

3. METHODOLOGY

3.1 THE RESEARCH

A formal questionnaire was prepared to gauge the students' level of awareness of tertiary education opportunities, using variations on the standard CPIT Initial Satisfaction Survey questionnaire, which uses the Likert scale for measuring subjective satisfaction.

The Burnside staff distributed the questionnaire to the 18 members of the two 13CIT classes who attended that day. The students were also given a covering information sheet explaining the purpose of the survey and the conditions of anonymity. (A copy of the questionnaire and covering information sheet is available on request.) The two teachers then collected in the completed questionnaires at the end of the class and returned them to the author for collation and analysis.

3.2 ANALYSIS OF DATA

The significant areas of results relate to the main purposes of the research - to establish the satisfaction level of having done the courses, the level of awareness of CPIT and its programmes before and after having taken the courses, and whether they would now consider attending CPIT. The results showed that the courses were a resounding success - from all these viewpoints.

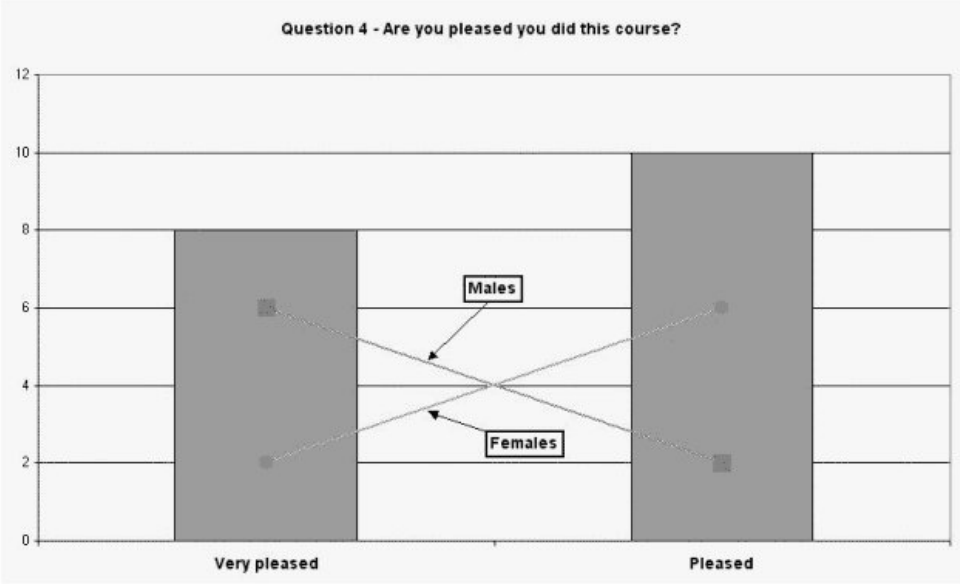

Figure 1. Question 4 – Are you pleased you did these courses at Burnside in 2001?

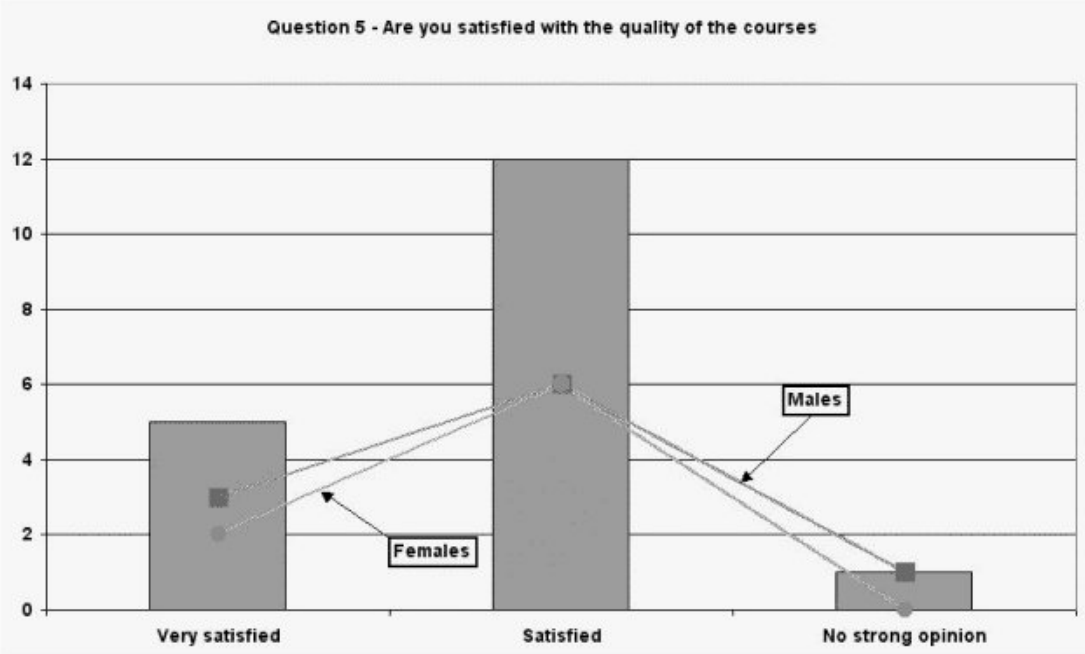

Figure 2. Question 5 – satisfied with the quality of the course at Burnside in 2001?

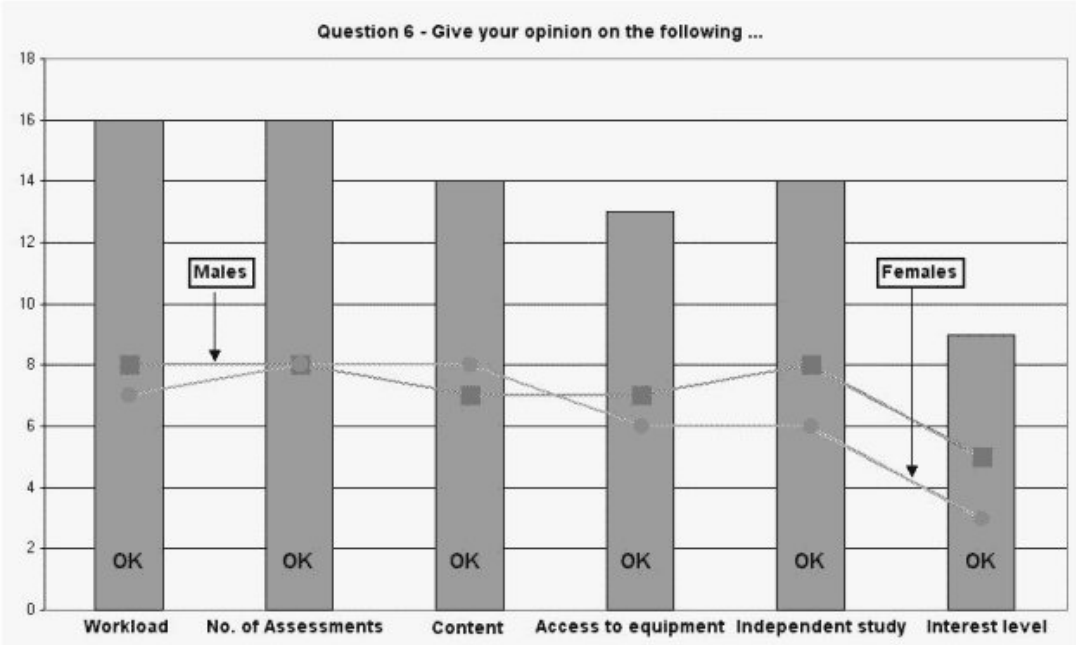

Figure 3. Question 6 – Opinion sought on a range of topics as shown.

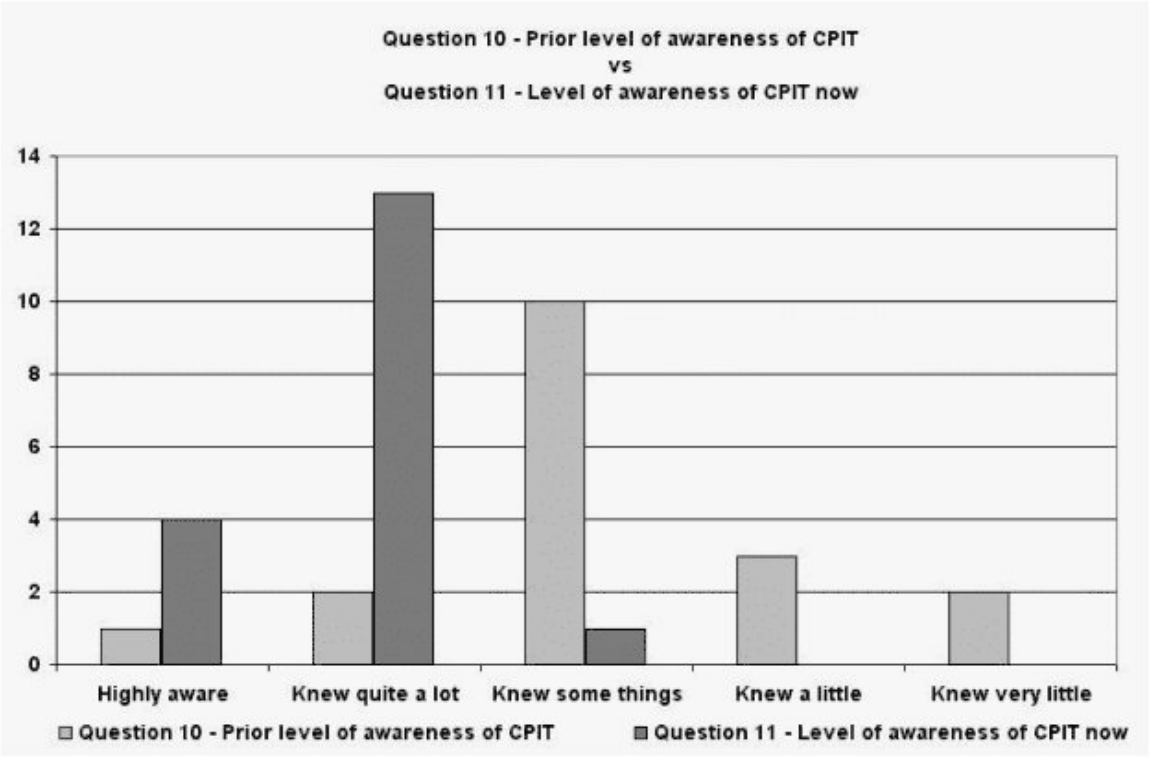

Figure 4. Questions 10 – Prior level of awareness of CPIT compared with Question 11 – Level of awareness of CPIT now, after having completed these courses at Burnside in 2001.

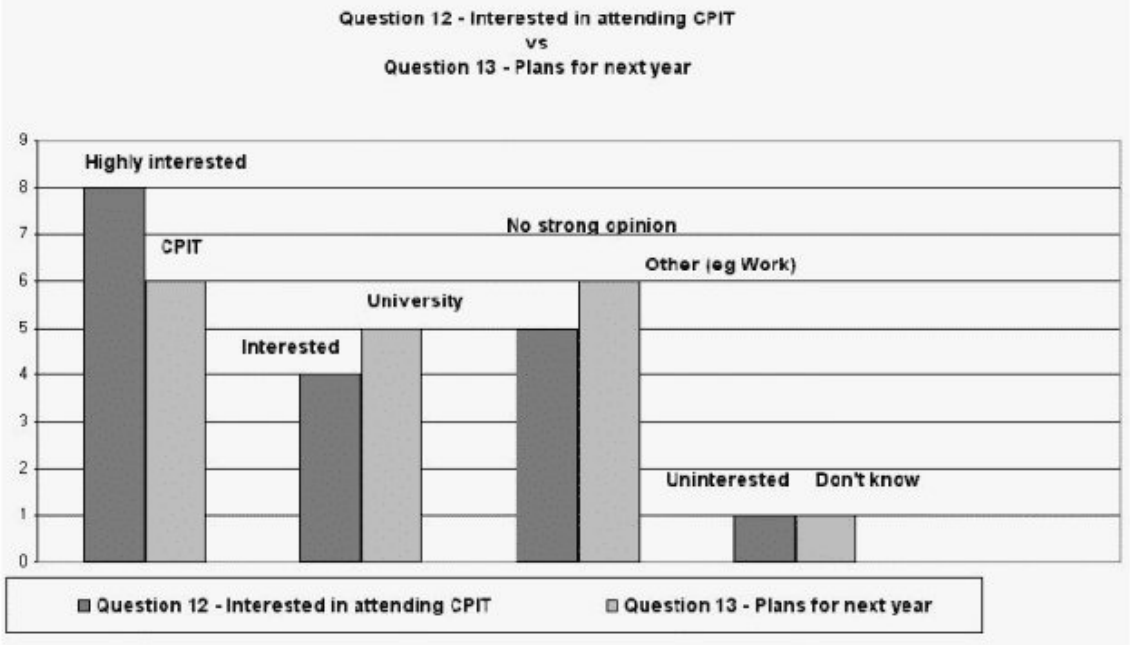

Figure 5. Question 12 – level of interest of those at Burnside in 2001 in attending CPIT in 2002 compared with Question 13 – the same students' plans for 2002.

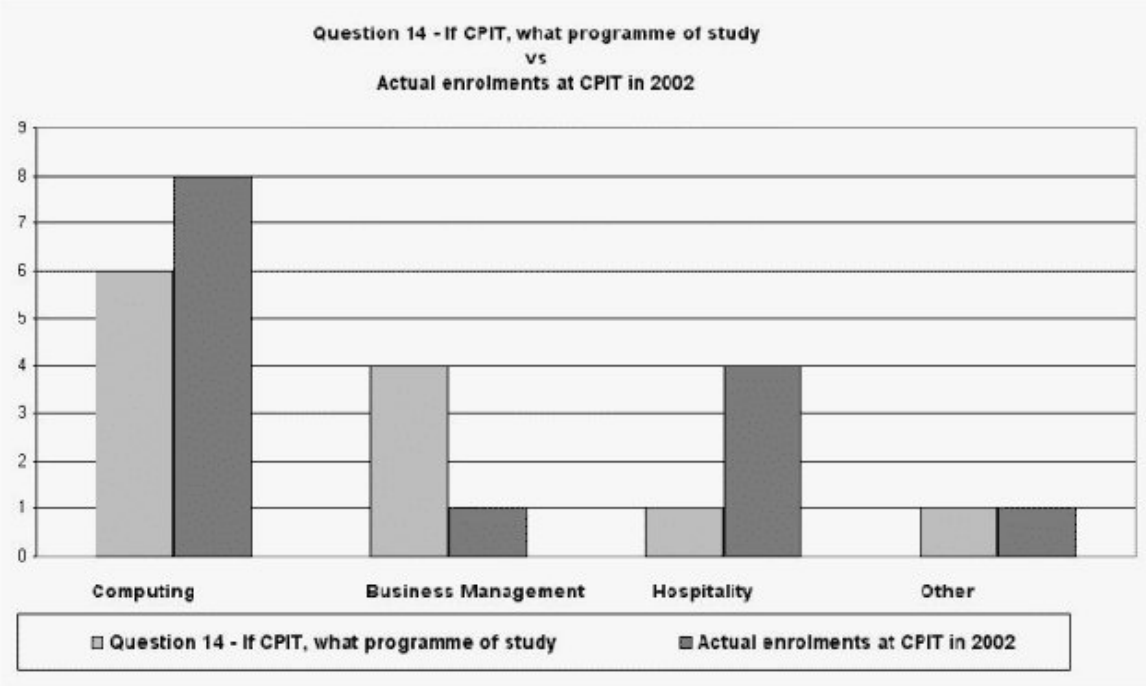

Figure 6. Question 14 – what would students at Burnside in 2001 study in 2002 if they attend CPIT compared with the actual enrolments at CPIT in 2002 of ex-Burnside students from Yr 13 2001.

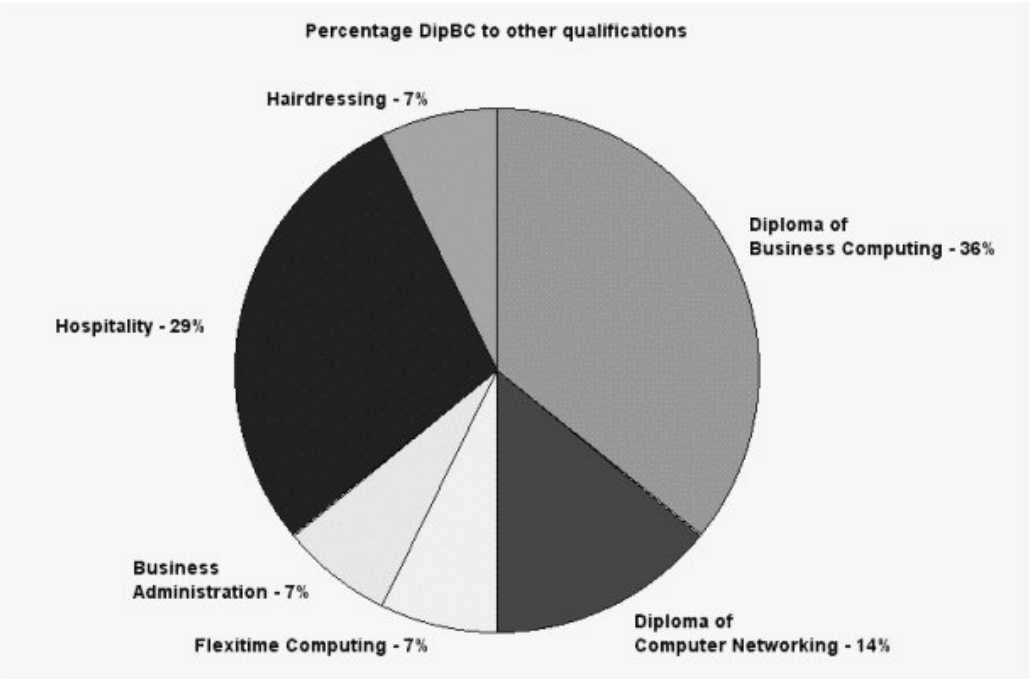

Figure 7. Comparison, by percentage, of the ex-Burnside students from Yr 13 2001 and what they enrolled in at CPIT in 2002.

The students were all either pleased or very pleased that they had done these courses and all but one of them were either satisfied or very satisfied with the quality of the courses (see Figures 1 and 2).

When comparing the DipBC courses with the other courses they were doing at Burnside that year, most of the students responded that they found the courses better in all area - motivating (72%), interesting (62%), well delivered (62%), and well resourced (72%) (see Figure 3).

Most of the students indicated that they either knew some things through to knew very little prior to doing these courses, whereas at the end of the course all but one pupil indicated they either knew quite a lot or were highly aware of CPIT (see Figure 4).

Many of the students (67%) were either interested or highly interested in attending CPIT in 2002, but intriguingly only 33% said they were actually going to attend CPIT in 2002 (see Figure 5).

However 78% of the students actually enrolled for courses at CPIT this year - more than twice the number who had planned to. This confirms the pattern found by Boyd and Chalmers (2001). They found that students did change their minds between late in Year 13 and the beginning of the following tertiary year, in that "the majority had developed or changed their plans in some way" (see Figure 6).

Of the 14 students who enrolled at CPIT this year, 36% enrolled in the Diploma of Business Computing, 29% in Hospitality courses, 14% in the Diploma of Computer Networking, and 7% in each of Flexitime Computing, Hairdressing, and Business and Administration programmes (see Figure 7).

4. CONCLUSION

What this means to CPIT is a 'captured' potential market of students better prepared for the DipBC (and other programmes of study) both by way of having already started them and being better equipped to handle the demands of tertiary study. These students were better informed as to their options and more able to make informed choices. These students were better prepared to handle the transition from secondary to tertiary study, and may be better equipped to survive there.

From CPIT's point of view the success can be measured in enrolments - 14 students from Burnside High enrolled at CPIT this year (five of which were enrolled in the DipBC - compared to the three enrolments over the past five years).

5. WIDER IMPLICATIONS

By targeting this school CPIT has now developed a marketable package - one for which CPIT already have several takers. Another large school, the third largest in Christchurch, Aranui High School, a decile 3 school, is now teaching one class of about 10 students the first of the three papers, HF100, and Burnside High School, of course, is well into their second year with almost 50 students this time. Two other schools are beginning negotiations for next year.

In addition to this, the Burnside success story has bred a 'spin-off' - the senior school style Christchurch College of Computing, which offers 10 of the DipBC papers to its two classes of Year 13 students.

6. FURTHER DEVELOPMENTS

While it appears that the results of the Burnside case study would show that the students were in a better position for more informed choices (Boyd and Chalmers 2001) and were in a better position for improved managed transition, the proof will be in their end-of-year results for 2002. Further research will need to be done to establish the ex-Burnside students' academic record this year and confirm the success of this exercise in transition to tertiary study at CPIT.

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