DROP OUT FROM

WANGANUI REGIONAL

COMMUNITY POLYTECHNIC

1992-1993

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ABSTRACT

In New Zealand recent changes in legislation have increased both the autonomy and accountability of the tertiary education sector. As a consequence, polytechnics have become painfully aware of the cost of student drop out from programmes both to their credibility as quality education providers and to their coffers.

The case study of student drop out from Wanganui Regional Community Polytechnic (WRCP) was undertaken in response to administrators' concerns that, as a small, recently established polytechnic, costs associated with the loss of students might threaten its economic viability. WRCP administrators feared an increase in the rate of drop out as changes to the funding of tertiary study created increased financial pressures for students.

The case study employed a range of techniques, including a survey of archived information and student questionnaires, augmented by the perceptions gained from informal discussions with staff to ascertain the extent and nature of drop out.

Analysis of data collected over a two year period (1992-1993) at WRCP revealed a pattern of drop out in terms of student characteristics, style and timing of withdrawal. Overall it showed that there was little to discriminate between the characteristics of leavers and those who persisted on a course.

The two main theoretical conceptualisations of drop out, the 'integration' and 'investment' theories, were found to share the assumption that drop out is the consequence of 'cost/benefit' analysis. However, despite increased fees and reduced allowances for many students, few cited financial reasons for withdrawal. An analysis of students' self-reported reasons for leaving indicated that finances are but one of many factors which affect a students determination of the costs and benefits of continued attendance. Many reasons given were outside the control of the Polytechnic. However, three Polytechnic academic schools were consistent in their reporting of high drop out numbers, suggesting the need for further research into programme related reasons for withdrawal in these areas. These findings were consistent with recent models, which portray drop out as a complex process influenced by a multitude of factors, including student background and characteristics on entry, environmental changes and institutional factors.

From these findings some strategies to enhance the 'fit' of students and hence improve their retention are suggested. Continued monitoring and further research of a more phenomenological nature are recommended in order to gain a greater understanding of student drop out.

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GLOSSARY OF TERMS

The following definitions of various types of student leaving behaviour have evolved a common currency in the literature and will be used in this study to mean:

- *drop out* refers to any student who leaves the programme of study for which they were enrolled in a given year. This term includes both those who formally indicate their intention to leave as well as those lost by way of attrition.

- *attrition* describes the process whereby an enrolled student ceases to attend classes and fails to respond to follow up procedures initiated by the institution. Such students may simply stop coming after quite regular attendance, or more often they 'peter out', missing lectures and getting behind with assignments before finally disappearing altogether; very rarely do students announce that they are withdrawing and explain why (after Smith, 1987).

- *withdrawal* describes the process by which a student (the withdrawer) who had enrolled subsequently informs the institution that s/he no longer wishes to continue studying.

- *failure* describes the process by which the student who had enrolled is prevented from continuing studies by the institution because of failure to satisfy regulations, such as not meeting the standards necessary for minimum rate of progression. (Also referred to as push out or exclusion - after Abbott-Chapman et al, 1992.)

- *wastage* refers to students who finally enrolled but who did not gain a course credit, ie who did not complete the course successfully, either through withdrawing before taking the assessments or by failing the assessment. Implicit in the use of this term is the financial focus of the institution's administration.

- *discontinuation* is the process whereby students do not return to progress from one year to another in a multi-level programme.

- *stop outs* are students who are taking a break from study (stopping out), but intending to return - this term differentiates between permanent decisions to withdraw from a programme and temporary breaks in study (after Abbott-Chapman et al, 1992).

- *persisters* are students who attend the programme they have enrolled in over the entire year or for the entire duration in the case of shorter courses. The persistence or retention rate compares the number of students completing the year with the initial number enrolled.

- *wavering persisters* is a term used to describe persisters who indicate they had thought of withdrawing or changing programmes, though for some reason they do not make the 'break' (after West et al, 1987).

- *transfer* - movement to another institution to continue studies

- *drop down* is said to occur when students lessen their study load, reducing the total number of units they are enrolled for, or dropping from a full-time study commitment to part-time.

ACKNOWLEDGEMENTS

CHAPTER 1:

INTRODUCTION

Student 'drop out' is familiar to most higher education institutions but it is only since the introduction of legislation which changed the autonomy and accountability of tertiary institutions in New Zealand that the polytechnic sector has become aware of the cost of leaving students both to the twenty-five institutions and the individuals concerned. The term 'drop out'[1] in this study refers both to those students who officially withdraw and to those who do not complete the units of learning for which they enroled within a given year, many of whom 'quietly fade away' (student loss by attrition) without informing the polytechnic.

1.1 The New Zealand Context

Students who drop out may represent a loss of revenue as well as a waste of scarce human, physical, administrative and teaching resources because, since the introduction of 'bulk funding', polytechnics have been subsidised by the State on the basis of the number of Equivalent Full Time Students (EFTS) enroled in particular cost categories. 'Bulk funding' of polytechnics (Ministry of Education, 1991, b, 11) was implemented in 1991, as a direct consequence of educational reforms introduced by the Education Act 1989 (EA) and the Education Amendment Act 1990 (EAA).

The intention of the EAA was to ensure more effiicient resource use and to make the tertiary sector more accountable for public funding, providing a mechanism for the control of state expenditure in this area (Chief Executives of British Institutions, 1993, 4). Under 'bulk funding', any shortfall in institutional operating costs has to be met from sources other than the State. Subsequent reductions in cost category funding levels, which effectively reduced institutional income, were compensated for by the introduction of higher course fees in many polytechnics.

When considered in conjunction with changes to government financial support for students,[2] introduced at about the same time, and the potential loss of earnings while studying, higher course fees created a situation in which the considerable financial investment required by students may have influenced drop out rates from polytechnics.

Thus, it seems, there are costs associated with student drop out, both to the individual and to the polytechnic, in terms of loss of income and wasted financial investments.

1.2 Theoretical Interpretations of Drop Out

Although drop out is not a new phenomenon in higher education, little polytechnic specific research was evident in the literature. One reason for this is the relative 'youthfulness' of polytechnics in New Zealand, most having been established within the last forty years. Another important reason is that drop out has only recently been regarded as a 'problem' in the polytechnic sector, as economic pressures have forced the optimisation of finite resources. However, two major conceptualisations of drop out were noted in the extensive international body of literature surrounding drop out from other higher educational institutions.

Despite their different origins, the 'integration' and 'investment' theories[3] share the assumption that drop out is the consequence of a 'cost/benefit' analysis. According to 'integration' theories, such as that put forward by Tinto (1975), a lack of 'integration' into the academic and social systems of the institution leads to a lack of commitment and eventually, when the costs of studying are found to outweigh the benefits, to drop out. A similar evaluation in which the student weighs up the value of their investment, in terms of rewards and costs, is proposed by the 'investment' theories, such as that developed by Bean (1980, 1985), Bean & Metzner (1985) and Schell & Thornton (1985).

While both the 'investment' and 'integration' theories highlighted the importance of 'costs' in relation to drop out, several writers, notably Johnes (1990), have highlighted the fact that finances are but one of many factors which affect a student's determination of the costs and benefits of continued attendance. Many models developed to describe and test the relationship of factors thought to influence drop out from other higher education institutions were found to have a number of important similarities: drop out was commonly portrayed as a complex process influenced by a multitude of factors, including student background and characteristics on entry, environmental changes and institutional factors.

However, these theories were developed predominantly from research based on University drop out data. Whilst the effects which institutional characteristics have on drop out are not known, the different funding systems, entry criteria, length and level of programmes offered and varying delivery styles alone suggest reservations in applying theories developed for other educational settings, in other countries, to the study of drop out from New Zealand polytechnics. This study, employs the findings from previous research only as a platform from which to launch an exploratory study of a particular instance, aiming to develop a greater understanding of polytechnic drop out from the study of a single polytechnic, Wanganui Regional Community Polytechnic. Subsequently, it may be shown that findings from this case study have general application across the polytechnic sector.

1.3 Case Study of Drop Out from Wanganui Regional Community Polytechnic

The investigation of student drop out from Wanganui Regional Community Polytechnic (WRCP) programmes was initiated because the institution's administrators were concerned that, as a small, recently established polytechnic, costs associated with the loss of students might threaten its economic viability. In particular, administrators feared an increase in the rate of drop out as planned changes to government financial support for students and higher course fees, resulting from reduced levels of funding to institutions, created increased financial pressures for students.

WRCP offers a wide range of subjects and levels of study for students from throughout New Zealand. Since its establishment in 1984, the Polytechnic had grown rapidly in size, so that by 1991 it boasted 843 Equivalent Full Time Students (EFTS). Of these, 353 were known to be actual full time students enroled in 'Formal'[4] programmes of study leading to nationally recognised, largely vocational, qualifications. An unknown number of students, attending part time or participating in short seminars and workshops, contributed to the remainder of the EFTS figure.

In 1991, the first year of bulk funding, records provided by WRCP's central administration indicated that 148 students officially withdrew. However, the Polytechnic administrators were not certain of the significance of this figure in relation to WRCP's total student population. Did this figure indicate a high drop out rate? What proportion of drop outs left because of financial hardship?

It was recognised that some level of drop out was probably inevitable as many students were known to withdraw for personally positive reasons such as beginning a new job or the opportunity for alternative further training.

However, in light of increased resources invested in the area of student support, and the implementation of quality management processes to gain feedback and improve education delivery, the numbers of students leaving programmes at WRCP appeared, to staff working on these initiatives, to be disappointingly high. Further, staff handling complaints recorded, for the first time, students demanding 'value for money'. Higher course fees apparently brought with them raised expectations of the Polytechnic's education services.

Drop out costs arise not only because leaving students may represent a loss of revenue and a waste of institutional resources but also because of the possible sense of personal failure and dissatisfaction for the individual. The WRCP Student Loans Officer, for example, indicated that

withdrawing students often expressed such feelings, whatever other reasons they gave for withdrawing. WRCP administrators feared that, if the students' reasons for leaving were associated with dissatisfaction with the programme or service delivery, then the reputation of the Polytechnic as a quality education provider may be at risk, giving rise to longer term marketing problems and possible loss of competitive edge. Gedye (1992) confirms this possibility, noting that dissatisfied customers are known to talk to between 20 and 30 people about their experiences, whereas satisfied customers tend to talk only to one or two others. These concerns lead to a consideration of the factors influencing student drop out, in particular, finances and institution related factors for leaving the polytechnic.

1.4 Overview

Adopting a case study approach, this research investigates the nature and reasons for student drop out from Wanganui Regional Community Polytechnic by using a variety of methods. From understandings gained about both the drop out process and the extent of the 'problem', this study also aimed to develop strategies to reduce drop out, (should this intent prove to be appropriate). A major function of the study was to establish a baseline of data against which ongoing monitoring could ascertain changes and identify possible future trends.

The study seeks firstly (in Chapter 2) to identify factors thought to affect drop out through an analysis and synthesis of previous higher education drop out literature. By categorising the findings from studies based on different research designs and methodological approaches, a greater understanding of apparently contradictory findings develops. This process enables issues and theories relevant to the study of drop out from WRCP are identified.

Whilst the drop out literature establishes the importance of a student's personality and previous experience as factors in drop out, external factors relating to the institution and its environment are also identified as having a major influence. The significance of external factors in drop out was of particular interest because around the time of the study a number of far reaching changes occurred as a result of government economic and educational policies. Thus, the second section of the literature review (Chapter 3) addresses the broad social, economic and political issues surrounding polytechnic education in New Zealand. This chapter indicates both internal and external factors which, through their impact on the administrative structure and resourcing of individual polytechnics, affect the very culture of these organisations including the delivery of programmes, the provision of student support services and possibly an individual student's propensity to drop out.

Establishment of the context for this research and the development of a platform of current knowledge about drop out allowed clarification and refinement of the research questions specific to the case study at WRCP. In Chapter 4, the case study approach is described and the subjects and data sources (both qualitative and quantitative) are identified. The results are reported in two chapters. The first, Chapter 5, overviews educational provision at WRCP, its history, administrative structure, programmes and student population, and provides a specific context for the interpretation of the drop out results reported in Chapter 6. The pattern of drop out at WRCP, over the two year period from 1992 to 1993, highlights several critical issues which are discussed in Chapter 7. This section reflects on the significance of differential and 'hidden' drop out rates and, through an analysis of who drops out and why, seeks to assess the importance of finances and institution related factors amongst the many reasons given for students leaving prior to programme completion.

The concluding section (Chapter 8) addresses key implications for WRCP and identifies areas for future research.

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[1] A full glossary of terms associated with drop out and other forms of leaving behaviour is provided on page ix.

[2] Outlined in Chapter 3

[3] The 'integration' and 'investment' theories are described more fully as part of the literature review in Chapter 2.

[4] 'Formal' programmes are a Ministry of Education defined category of particular significance in drop out and have been identified in this way to avoid confusion between the common usage of the term 'formal'.

CHAPTER 2:

LITERATURE REVIEW: DROP OUT THEORIES

Using selected studies to illustrate major shifts in methodological approach, this first section of the literature review traces the search for the cause of drop out. Initially the search focus was on the characteristics of leavers, but later research suggests that drop out is a complex phenomenon influenced by a multitude of interdependent variables and the heterogeneity of students. Recent developments have seen two major conceptualisations proposed which endeavour to move beyond description to explain the processes that lead to drop out.

2.1 Drop Out: Relevant Research

There has been extensive research into student drop out from University courses both in New Zealand (Hooper, 1988 and 1989; Jones, 1978; Tremaine, 1979) and overseas (de Rome and Wieneke, 1982; Johnes, 1990; Knight, 1991; Metzner, 1989; Phythian & Clements, 1982; Powell, Conway & Ross, 1990; Roberts, Boyton, Buete & Dawson, 1991; Smith, 1987; Sweet, 1986; Tight, 1992; Woodley & Parlett, 1983, to name but a few of the more recent studies). However, although drop out is not a new phenomenon in higher education, it is only recently that it has been regarded as a problem by polytechnics in New Zealand. This is reflected in the dearth of sector specific research on this topic, limited to Ostman et al. (1988), Polyview Teaching and Learning Task Force (1984), and Zajkowski (1991). Another factor contributing to the limited literature on polytechnic drop out is, of course, the recent development of polytechnic education in New Zealand.

Since the introduction of the Education Amendment Act 1990, the term 'polytechnic' has been officially defined in New Zealand, to include 'technical institute' and 'community college'. However, overseas these terms encompass a wide variety of different educational deliveries, which may or may not equate to the New Zealand polytechnic experience. Hence, whenever possible, local polytechnic studies have been selected to illustrate major research trends.

A blurring of the traditionally recognised boundaries within the tertiary sector has also occurred as a result of legislation, allowing polytechnics to offer degree programmes. Overseas and University based studies are included in the literature review on the grounds that they contribute to the researcher's 'pre understanding' (after Gummesson, 1988) and to the platform of knowledge from which this study of polytechnic drop out has evolved.

Building on Pantages & Creedon's (1978) comprehensive (largely American) evaluation of drop out research conducted over the period 1950 to 1975 and West, Hore, Bennie, Browne & Kermond's (1987) review of recent Australian studies, this chapter provides an overview of drop out in higher education, through the addition of New Zealand findings (these were limited) and the results of more recent overseas studies, where these gave new perspectives.

Munro (Cited in West et al., 1987) encapsulates some of the frustrations experienced in reviewing the drop out literature which she describes as "a rather murky body of knowledge". It would be convenient if drop out research fell into distinct categories such as that associated with student leaving styles or with factors under the control of the institution or with broad social issues but, while the literature includes these perceptions, they are often blended together, Munro (Cited in West et al., 1987) explains. A further complication is that different methodologies and operational definitions employed in drop out research restrict cross study comparisons. Thus, through an analysis of previous research categorised by research design, an understanding of factors which are thought to affect drop out from higher education institutions is developed.

2.2 Methodological Approaches to the Study of Drop Out

Three major research designs have been identified by West (1985, a), calling on Terenzini's (cited in Willett & Singer, 1991) analysis of drop out studies:

(i)   the autopsy, or post hoc design, where students who withdraw are identified and a sample is surveyed or interviewed (also referred to as 'retrospective' studies, according to Willett & Singer, 1991);

(ii)   the cross-section design in which both a sample of withdrawers and a (sometimes matched) sample of non-withdrawers is included;

(iii)   the longitudinal design in which a cohort sample identified at enrolment is followed over time, with information collected at the beginning of the programme and at various points over the lifetime of the study, until an expected date of graduation and sometimes longer.

In an international overview of factors influencing drop out and reasons given for leaving, Thomas (1985) discovered that the bulk of the literature prior to that time comprised demographic studies of a descriptive nature. Gekowski & Schwartz (cited in Pantages & Creedon, 1978) warn that the findings from this type of research are suspect, because there is a focus on either the characteristics of drop outs or of persisting students, with no comparisons made. They note that early drop out studies typically focused on single factors when, they

argue, multiple factors operate concurrently to produce drop out. Many subsequent studies support this view - notably that conducted in a New Zealand Polytechnic by Ostman, Wagner & Barrowclough (1988). Investigations adopting post hoc designs commonly select a group of students who have already dropped out and then attempt to discover the reasons for dropping out. West (1985, a) explains that the reliability of this approach is questionable because of the possible influence which subsequent events have on the students' recollections. West also doubts the honesty of the reasons given for withdrawing because of the negative connotations associated with withdrawal. This view is shared by Knight (1991) who maintains that many of the reasons given by drop outs are merely socially acceptable attributions and not the real cause of withdrawal.

Although West suggests that indepth follow up discussions with students and the gaining of others perspectives can be used to overcome the inherent weakness of post hoc studies, Jex & Merrill (cited in Pantages & Creedon, 1978) maintain that this approach should be abandoned in favour of longitudinal studies. The longitudinal approach permits an exploration of factors that affect dropping out at the very time they are exerting their effects and the approach provides a "clearer view of the complex interaction of factors that influence a student to withdraw ...," Pantages & Creedon (1978, 50) argue. This approach also enables the researcher to distinguish more accurately between students who drop out and return to the same institution and those who transfer to another place. Whilst many drop out researchers agree that the longitudinal design is superior, costs and time factors limit its general applicability in favour of cross-sectional designs.

Summary

This section described the major research designs which are employed to study drop out, highlighting limitations which need to be taken into account when considering the findings across a variety of studies.

2.3 Problems in Defining the Population of Study: Terms Associated with the Leaving Behaviour of Students

The wide range and lack of clarity of operational definitions which are employed to study drop out, and the diversity of data presentation, also pose problems in attempting to compare the findings of various studies.

Many different terms[1] are used in educational literature to describe the leaving behaviour of students, including discontinuation, wastage, failure, drop out, attrition and withdrawal. However, the various terms which are associated with drop out are "used very loosely and mean different things to different people" (Woodley & Parlett, 1983, 2).

Tinto (1975, 90) was one of the first writers to draw attention to the limitations imposed on theory development by the inadequate attention which is given to questions of definition, leading researchers to "lump together ... forms of leaving behaviour that are very different in character". For example, it is common for researchers not to distinguish between institution initiated drop out resulting from academic failure and voluntary withdrawal. Similarly, permanent drop outs are often categorised with transferring students and temporary withdrawers who plan to return and this lack of consideration of the numbers of students flowing back into the education system can lead to over-estimation of drop out (Willet & Singer, 1991).

Tinto captures the essence of the problem well by explaining that the failure to make such distinctions has resulted in "findings contradictory in character and/or misleading in implication" (1975, 90). By way of illustration, he notes that inadequate distinctions between academic failure and voluntary withdrawal have resulted in findings which indicate scholastic ability to be inversely related to drop out, unrelated to drop out and directly related to drop out.

In contrast, Pantages & Creedon (1978) claim that the distinction between 'voluntary' and 'non-voluntary' withdrawal ought to be abandoned on the basis that both forms of withdrawal are determined by social forces: why else do students qualified for admission get poor grades, they question. Bean (1985) is of the same view. He argues that students who leave an institution involuntarily, due to violation of social or academic standards, represent failures of either socialisation or selection.

However, selection criteria are variable between institutions and, over time, within an institution. Different types of institutions have graduation rates which reflect their selection policies. For example, the number of drop outs can be expected to be low in an institution with a highly selective system of admissions. Conversely, the implementation of 'open door' and 'affirmative action' policies allows greater numbers of 'at risk' students to have the opportunity to participate in higher education with the consequence that drop out may be high from institutions which adopt such policies, as they must still maintain the academic standards of their qualifications.

Such examples of the diversity of interpretation of leaving behaviour highlight the need for drop out studies to clearly specify the context of institutional policies and practices, in order to develop a better understanding of the factors which affect drop out, although few attempt to do this.

How the term 'drop out' was defined operationally was another major difficulty in comparing findings. What constituted 'drop out' varied enormously according to the period over which various studies were conducted, and the point at which data collection commenced. Depending on the research design, data were found to be concerned with drop out in a given year, with

continuation from one academic year to the next, or with graduation rates. Willett & Singer (1991) maintain that each year more and more students are taking longer to complete[2], so that at the time chosen as the end point of a study such students may be neither graduates nor drop outs.

There were also differences as to when an applicant was formally recognised as a student and, therefore, eligible to be termed a 'drop out' if studies were discontinued.
Data collection began variously:
- at the point of a student's first contact with the institution,
- after an application form was submitted,
- once selected onto a course,
- once enrolment procedures were completed,
- after the full fee had been paid
- after a certain specified period of time, prior to which a full refund
  was given if the student withdrew.

In most New Zealand polytechnics normal practice is to consider a student enroled on completion of an enrolment form and payment of enrolment fees (or arrangement of a student loan). From this point, the student's progress becomes the concern of the polytechnic and the student becomes a potential drop out. In contrast, a review[3] of the literature indicated that a system of provisional enrolment operates in many universities. Provisional enrolment gives prospective students the chance to try the new educational experience without penalty as withdrawal before final registration (several weeks after provisional registration) is not considered as 'dropping out' and is not part of an individual's academic record. Neither is it considered in the final drop out figures published by the institution, and hence provisional enrolment would seem to result in artificially low drop out rates for those institutions which allow this practice. Once again, the importance of an understanding of an institution's policies is highlighted as an important factor in interpreting and understanding drop out findings.

The purposes for which data were collected appear to determine the way in which the information is presented, once again posing problems in comparing the findings from various studies. Measures of performance, or rates, which compared leavers with the total number of participants in the population of study, were found to be largely institution, departmental or course based, reflecting the financial impact which drop out has on activities at each of these levels within an educational organisation. By far the largest proportion of institution-focused drop out studies were found to emanate from distance providers, because they were concerned that they were experiencing a much higher drop out rate than their conventional counterparts, although rarely was this assumption checked. Similarly course drop out tended to become the focus of study only when drop out from a programme was considered as being unacceptably

high. Business/accounting and management programmes were a frequent target. It was uncommon to find such studies placed in the context of drop out from other programmes in the same institution, or referenced to drop out from similar programmes offered by other providers. There was no way of identifying the degree to which these cases were unique/common to other situations, a problem exacerbated by the lack of consistency and clarity in the operational definitions applied to drop out research in higher education.

Whilst a few of the earlier researchers considered drop out from the students' perspective, more recent literature indicates a shift from an institutional towards a student-centred approach to drop out, evidenced by a trend to classify drop outs and persisters into a greater number of categories as suggested by Tinto (1975) and later by Pantages & Creedon: "finer discriminations between the categories will yield better results and clearer interpretation ... and will improve our understanding...," (1978, 55). Various criteria have been employed to categorise students ranging from demographic and personality characteristics to reasons for, and timing of withdrawal and these are discussed in greater depth in Sections 2.5 and 2.6 of this chapter.

According to Tinto (1975), the failure of previous research to resolve questions of differentiation of the target population are of concern because they significantly impact on policy and planning in higher education. The identification of target populations which require specific assistance is important to polytechnic administrators because they need to consider strategies, such as flexible admission and tutoring systems, which can respond to the heterogeneity of the student population caused by learners who transfer or return after a sometimes lengthy period away from study. Administrators also need this information to make appropriate financial provision to take account of both the numbers and special needs of these students.

However, West, Hore, Bennie, Browne & Kermond (1987) point out that gross statistics, such as the percentage of students failing to complete their course, do not take into account qualitative aspects such as whether the decision to withdraw was 'good' or 'bad' from the student's perspective. For example, transferring students are clearly losses from the institution's point of view, although this process may result in a positive outcome for the students concerned. Similarly the institution might regard students as 'unsuccessful' if they do not gain full credits in a given year for the courses in which they have enroled. However, a student who withdrew from three courses but passed one might still consider themselves as successful. This consideration is an important one, particularly for polytechnics, as New Zealand Qualifications Authority (NZQA)[4] requirements for standards based assessment and a 'units of learning' approach to programme curricula have lead to a questionning of the value of traditional measures of drop out, such as the proportion of students completing a programme.

Summary

Investigations in this field have been characterised by inconsistency in defining target groups, both theoretically and operationally and the importance of considering drop out findings in the context of institutional policies and procedures has been signalled. Indeed, Panos & Astin (1968, cited in Pantages & Creedon, 1978) maintain that the results of many studies are not comparable because they deal with different phenomena. Munro (1987, cited in West et al., 1987) is in agreement with this view, noting that "findings are rarely generalisable outside the situations in which the research is conducted". Failure to resolve questions of definition, and an inability to move beyond description towards an explanation of the processes that lead to withdrawal, are factors which have hampered our understanding of the nature of the drop out process from higher education, according to Tinto (1975), one of the early drop out theorists. Unfortunately little progress appears to have been made on this issue in the intervening decades.

Whilst the student perspective is highlighted as an important consideration, most studies were found to reflect the institution's point of view, because drop out has a heavy impact on finance and operations: it is "a waste of private and social investment in higher education", according to Johnes (1990, 87). Section 2.4 examines drop out rates and patterns, focusing on the institutional perspective.

2.4 Drop Out Rates and Patterns: The Institutional Perspective

In terms of sheer numbers, drop out deserves the attention of those interested in, and affiliated with, institutions of higher education, Pantages & Creedon (1978, 49) maintain. Certainly drop out rates reported by previous researchers would suggest that drop out is a problem of some magnitude for many tertiary institutions.

2.4.1   Drop Out and Graduation Rates

Rates of drop out from higher education have remained strikingly constant over the past 100 years despite marked growth in participation rates and radical alterations to the tertiary system, Tinto (1982) claims. Analysis of major research reviews conducted between 1913 and 1975 lead Pantages & Creedon (1978) to a similar conclusion. They maintain that drop out rates had not changed significantly over this period, averaging at just under the 40% level.

In contrast, an analysis[3] of selected drop out studies conducted in New Zealand and overseas revealed a wide variation in drop out rates reported by individual institutions, ranging from 12% to 82%. Whilst previous discussion (Section 2.3) would suggest that this variation is partially attributable to the myriad of operational definitions employed by researchers, changes in the

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political, economic and social environment experienced over the last 20 years may also have contributed to these differences in drop out rates.

More detailed analysis of drop out rates suggests that, on average, less than half the entering students graduated within the normal programme term, although many completed their studies at a later date. Indeed, unbroken participation appears to be the exception rather than the rule. For example Thomas (1985) found that graduation in the minimum time was never the norm for 40% of students. However, of the students who dropped out for any length of time, Garrison (1987) found 70% of them re-enroled at either the same institution at a later date or at another one. Similar findings relating to drop out and graduation rates were corroborated by reviews of recent Australian studies (Clark, 1989; West et al., 1987). Whilst West et al. noted that 25% of drop outs did so without failure, a number of New Zealand researchers (Boshier, 1969; Hooper, 1988; and Ostman et al., 1988) found that students who evidenced past failures, or a history of dropping out, were more likely to do so again.

Most of the studies were found to be retrospective studies of cross sectional design and subject to the criticisms outlined previously (Section 2.2), especially the lack of distinction made between temporary and permanent withdrawal. The findings from Eckland's (1964) longitudinal study (cited in Pantages & Creedon, 1978) suggest that previous investigations have over-estimated drop out rates by about 10% once returning and transferring students are taken into account. Panos & Astin (cited in Pantages & Creedon, 1978) however, question the desirability of distinguishing between temporary and permanent withdrawal, noting that researchers wishing to make such a distinction would have to wait until all the students in the sample either re-enroled or died.

Summary

Although many studies demonstrated some consistency of drop out and graduation patterns over time, the huge variation of rates evidenced across the whole spectrum of institutions studied and the variety of operational definitions employed gives rise to criticism regarding the validity of the findings. As West et al. (1987, MF,3) conclude "these crude figures hide more than they expose". The following sections, therefore, focus on a finer analysis of both the institution and groups of students in order to gain a better understanding of the drop out phenomenon.

2.4.2 The Characteristics of Institutions as a Factor in Drop Out

Early researchers assumed that the institution is a constant for all students. Therefore, the institution received little attention as a factor in drop out until Iffert's (1957) survey (cited in Pantages & Creedon, 1978) revealed its importance. Hence, it is only recently that research has focused on the effects of the institutional environment on student drop out and retention.

"Dropping out is an interaction between an individual and an institution...," Cope & Hannah (1975, 9) explain. The institution and its environment influence the formation of goals, produce changes in students who attend, and also act as a selective device prior to enrolment. Different types of institutions have different public images and, therefore, appeal to different types of students. Where the educational goals of the student are compatible with the educational philosophy and orientation of the institution then the chances of the student persisting are enhanced. This notion is described in the drop out literature as 'fit' (Astin, 1975; Cope & Hannah, 1975; Marinaccio, 1985; Pantages & Creedon, 1978). The 'fit' between student and institution is thought to account for most of the transferring, stopping out, and dropping out of students from institutions.

Prospective students are interested in choosing an institution to maximise the benefits they expect from higher education, whereas tertiary administrators hope to recruit and select the applicants best qualified to capitalise on the particular education programmes offered. Astin (1975), therefore, deduced that selection and recruitment procedures were also about 'fit': if the student attended an institution at which the social backgrounds of other students resembled their own background, especially regarding town size, religion, and 'race', then the likelihood of persistence was enhanced, he argued. The notion of 'fit', described by Pantages & Creedon (1978) as one of the best theoretical focuses for understanding drop out, has important ramifications for the implementation of equal educational opportunity (EEdO)[5] policies which are common in polytechnics. EEdO policies aim to detect and take steps to remove barriers to education for all potential learners, but particularly those exhibiting low participation and success rates in polytechnics. Application of the 'fit' theory may be able to explain why minority groups do not participate/persist in higher education and may also prove useful in developing strategies to overcome such barriers.

Type

According to overseas studies reviewed by Pantages & Creedon (1978) higher drop out rates were indicated at state supported institutions than at private ones, and at technical institutes compared to liberal arts colleges and universities. Many studies indicated higher drop out rates from distance education providers than from conventional institutions, although the "openness and accessibility," (Powell et al., 1990) and part time nature of study (Tremaine, 1979) were major factors in distance drop out. As few New Zealand polytechnics evidenced similar administrative structures or subject specialisations to those overseas institutions surveyed, this particular line of research was not found to be particularly useful, except to suggest that polytechnics may evidence differential drop out rates according to their origin: that is whether they were originally established as a technical institute or community college.[6]

Size

Some earlier studies identified a relationship between size and persistence, while others concluded there was none, according to research reviews undertaken by Cope & Hannah (1975). Astin's (1975) comprehensive, longitudinal study found that small institutions (fewer than 500 students) had higher drop out rates than expected although otherwise there was no apparent correlation between institutional size and persistence. Astin observed that larger institutions were seen by students as offering greater curriculum diversity and national prominence, whereas smaller ones were able to give personal attention and provide a collegial environment. Thus, it would appear that size alone was not the critical factor in drop out. What appeared to be important was the match or 'fit' between what the student expected and what the institution could offer because of it's size.

Tinto (1975) was critical of many of the earlier studies which focused on institutional size and drop out: many simply categorised institutions as above or below a given size without controls for the type or quality of the institution. Calling on the work of Rock, Centra & Linn (1970), which took into account levels of institutional income per student, a factor considered to indicate high quality institutions, Tinto suggested that "very good" smaller colleges might be as effective in promoting students to graduate as larger "high quality" institutions, but in different ways. The smaller institution may be able to enhance persistence through increased student-staff interaction because of its normally lower student-faculty ratio. This should lead to greater academic 'integration' as evidenced by good grades and intellectual development, he theorised. Larger institutions, normally more heterogeneous in student composition, may enhance persistence through their ability to provide a wider variety of student sub- cultures, leading to greater social integration. So although the theoretical foundation offered by Tinto, based on lack of integration, differs somewhat from Astin's notion of 'fit' both of these earlier researchers suggest that the size of an institution alone cannot account for differences in drop out rates between institutions.

Bradley, McLachlan & Sparks (1990) recent study on the nature and extent of stress experienced by Australian students attending two different sized tertiary institutions (one with 3,000 students and the other with less than 900) also failed to add support to the notion of a direct relationship between institutional size and drop out. This may have been because of the very distinctive characteristics of the institutions selected for study, as these were extremely diverse on a range of factors other than size. Problems in controlling the number of factors involved when conducting research across widely different systems and settings have been commented on by other researchers (notably Taylor et al., 1986) and, as a result, little other cross-institutional work on sizes as a factor in drop out appears to have developed these ideas further.

Mode of Delivery

As most polytechnics in New Zealand are now moving to include more 'open learning'[7] modes of delivery in their programmes, the traditional differentiation between 'distance' and 'conventional' teaching/learning processes is becoming somewhat blurred.

Distance teaching institutions appear to be associated with significantly lower rates of successful completion of courses and programmes of study than campus-based institutions according to Powell et al. (1990). And an 'horrendous' non-completion rate of over 50% has been observed in systems where the institution permits students to work at their own pace without absolute deadlines, Daniel & Marquis (1979) say (in Ostman et al., 1988). In their study of drop out from a New Zealand distance polytechnic, Ostman et al. (1988) acknowledge that drop out statistics validate the criticism of distance learning as not being cost effective and confirm that distance education students are more likely to drop out than are classroom students (with reference to Feasley, 1982). However, Tremaine's (1979) New Zealand University study led her to conclude that problems which resulted in the students leaving their extramural programme were related to being part-time rather than to the distance mode of delivery itself.

Thus, it appears that both the mode of delivery and the nature of enrolment (full time or part time) are factors which need to be considered within the mix which determines the unique character of that institution.

Summary

Apart from the high drop out rate noted for distance education institutions, there was little clarity in the relationship between institutional type and drop out. However, the 'fit' between the institution and the student has been identified by a number of researchers as an important concept in understanding drop out behaviour. The characteristics of individual institutions differ according to many factors including the variety of students enroled, the range and level of subjects taught, the styles of teaching, modes of delivery, and types of assessment procedures used. These aspects are picked up in the next section which focuses on drop out patterns observed within an institution.

2.4.3   Drop Out Within Institutions

Drop Out Patterns Associated with the Level of Study

Most withdrawing students are new to tertiary study, with a greater drop out rate noted in first year (Bean, 1985; and Clark, 1989) or first level (foundation) programmes (Garrison, 1985; and Smith, 1987). Bean (1985) attributed the higher first year drop out rate to the effect of grades,

which were thought to take their toll early, as students left because they expected to fail. Alternatively, Boshier's (1969) research into New Zealand University extension drop outs suggested that lack of familiarity with the requirements and expectations of tertiary study may be a key factor. West et al's (1987) multi-institutional Australian study would appear to support this notion because early withdrawers predominantly cited reasons associated with academic preparedness. Difficulties experienced in making the transition from school to less structured study and the "unusual expectations some students have been given of tertiary education," (West, 1987,48) were the most significant cluster of problems identified and these were reflected in dissatisfaction with either the course or the institution, whereas finance and job related reasons became more important for withdrawers beyond the first year. They found that 'first timers' were more likely to drop down to part-time study than withdraw altogether. Bean explains that if institutional 'fit' results from socialisation and not selection, one would expect 'fit' to increase over time, so that students could be expected to become more committed to finishing, the closer they get to completing their qualification.

In contrast, Woodley & Parlett's (1983) analysis of Open University (United Kingdom) programmes showed that the highest drop out rates were found in third and fourth level courses. Although the jump from second to third level courses was considered by respondents to be a significant factor most were mature students studying part-time extramurally and "as people get older and spend longer in the system, they are less inclined to have the time and energy" (Woodley & Parlett, 1983, 42). Differences in drop out rates noted between first and higher levels of study at the Open University may, thus, be a function of the mode of delivery, (distance learning) or a function of part time study. However, further analysis of the drop out rates recorded for each level at the Open University revealed that if the numbers of students failing to complete final registration had also been included in the calculations, drop out among new students would be about as great as second level, highlighting, once again, the problems of definition in drop out research and the dangers inherent in cross-institutional comparisons.

Although little research appears to have been done in either New Zealand or Australia on the possible relationship between drop out and the level of study, especially drop out amongst first time tertiary students, it was clear from overseas research that this was an area worth exploring further in relation to the polytechnic sector.

Differences Between Subjects, Courses and Departments

Differences in drop out rates between subjects, courses and departments were recorded in many studies. Science and maths drop out rates were consistently higher than arts and social sciences in distance education offered by the Open University (Woodley & Parlett, 1983; Phythian & Clements 1982). de Rome & Wieneke's (1982) longitudinal study at the University

of New South Wales found engineering students were the most likely group to discontinue because of failure to meet academic requirements. They noted that early leavers were most likely to be arts students although this may have been attributable to the nature of their enrolment as most were part- timers.

Smith's (1987) study of participants on foundation programmes at the University of Newcastle, Australia, revealed that some subjects placed greater strain on students than others, but the results did not indicate the arts/science dichotomy apparent in some of the studies referred to previously. A similar view was proffered by Hooper's (1989) New Zealand study of Massey University extra mural accounting drop outs. He noted that drop out rates varied widely amongst courses with no conformity among related subjects. Hooper claimed that drop out rates were random across all faculties although he provided little evidence to support this.[8]

Differential drop out rates across subject areas were also noted in New Zealand studies conducted in the polytechnic sector by the Polyview Teaching & Learning Taskforce (1984). Whilst this group observed variation both within the programmes and amongst departments, they reported that the Arts and Community Studies[9] department at Christchurch Polytechnic exhibited the lowest overall drop out rate of any department, as well as consistently low drop out rates in individual classes. However, this was found to be a function of the length of programmes in this area (most were short courses) rather than of the nature of subjects offered.

It would appear that subject effects were also influenced by the course context, particularly by whether the course was career oriented. A cross-disciplinary study conducted by Jones (1978) at Auckland University revealed that those who enroled in the 'professional' faculties were more likely to return after the first year than those enroled in general arts or science courses, a trend attributable to the perceived career benefit of professional courses.

Hooper's (1988) study of accountancy drop outs indicated that vocational 'award' courses made greater demands on students than non-vocational ('recreational') courses. Hooper also confirmed Hibbett's (1986) earlier findings that drop outs had expected their course to be interesting, although this expectation was not found to be so significant among successful students.

These somewhat inconsistent findings suggest that departmental course ownership is a rather crude category, masking many course characteristics which influence drop out, including the overall course design and delivery and intrinsic difficulties of subject matter.

Timing of Drop Out

Within any year, there was a tendency for drop out to occur early in the programme. Hooper's (1989) Massey University study indicated that most drop outs, half the final number, occurred before the due date of the first assignment. This early leaving group commonly reported being in the wrong course, or taking too many papers as reasons for dropping out. Hooper found a further 9% of students left before the second assignment, citing work pressure and course demands as their main reasons. The remaining students who left later in the academic year, dropped out because they found the course too hard to cope with.

Research conducted by Barger & Hall (1965), de Rome & Wieneke (1982), Tremaine (1979), West et al. (1987), and Woodley & Parlett (1983) supported the notion that particular factors were associated with the time of withdrawal. Although finances, dissatisfaction with the institutional environment, lack of motivation and the gaining of full time employment were reasons for leaving given by those who withdrew early, many found the course different from what they had expected. The early withdrawers were more likely not to be in the programme or institution of their first choice and to have lacked a real commitment to further study, sheltering in tertiary education while they sought employment. Later drop outs were more likely to give academic reasons, these studies found.

Thus, it seems that it is the student who is 'new' to higher education, the entering students, the first year students, who are more 'at risk' of dropping out, a notion in keeping with Anderson & Darkenwald's (1979) study which revealed that participants on adult basic education courses (the equivalent of foundation courses, or second chance education in New Zealand) were four times more likely to drop out than other adult education participants, a view supported by Boshier's earlier (1969) New Zealand study. However, Anderson & Darkenwald did not confirm the pattern of early drop out, noting that basic education participants were "no more or less likely to drop out at the beginning or end of a course", (1979, 27). These contradictory findings may be attributable to differences between the student populations of the various studies. Indeed, West et al. (1987) maintain that such findings confirm the need for researchers to disaggregate withdrawing students into different types. Part of the problem in obtaining unequivocal answers about factors affecting withdrawal, has been the failure of previous studies to separate different types of students, according to Tinto (1982). Whilst the forces that lead to drop out in the early stages of the student's academic career are quite different from those that influence drop out later, it appears that these may also differ for different types of students.

Drop Out by Nature of Enrolment: Part-time versus Full-time

The apparent contradiction in findings regarding drop out rates at different levels and in different subjects may be attributable to other factors, including whether the students are studying full-time or part-time. Thomas (1985, 43) shifted the focus from the programme to the participant, arguing that "Dropping out is a highly individual matter". He noted that part-time students were more likely to be mature age[10] and tended to have higher drop out rates than full time students coming directly from school. Smith's (1987) study revealed that as many as half the part-time mature age students dropped out, mostly through attrition.

O'Shea & Corrigan's (1979) indepth study of working class participants in adult education appeared to confirm the view that many folk commenced tertiary study in a tentative way. Often the students' first taste of tertiary study is to attend a hobby or non-assessed introductory course, probably as a part-time student. As confidence grows, the student may feel capable of enrolling in a more academic programme or extending studies to a higher level, and may also make the commitment to attend full-time. It was, then, not surprising to find that several studies reported a higher drop out rate for part-timers than for full-time students (Jones, 1978; Katz & Barrett, 1972; Knight, 1991; Tremaine, 1979). Part time drop outs may be first timers experiencing difficulties in adjusting to the culture and expectations of tertiary study (Boshier, 1969) or alternatively, they may be leaving because they are finding the conflicts between study and family or work commitments unresolvable (Hackman & Dysinger, 1970).

Summary

A number of common patterns of leaving behaviour were able to be identified, despite concerns about the misleading nature of drop out rates (Willett & Singer, 1991). Those new to tertiary study were generally found to be more at risk of withdrawing than those enroled in subsequent years of a programme or on more advanced types of programmes. A differential drop out rate was noted between subjects and departments in a number of studies, although there was little consistency in findings, suggesting that this factor was only one of many affecting drop out. Part-time, mature age enrollees and people on longer courses were found to be more likely to drop out than younger, full-time participants and those on shorter courses, features apparently related to time management and the pull of external responsibilities. Early drop outs (before the first assessment) were found to form the largest proportion of the total number of those who dropped out in any one year, and the reasons given for leaving suggest implications for career counselling prior to enrolment. However, students rarely announced their intention to withdraw. They just stopped attending or gradually dropped out after a period of irregular attendance, posing difficulties for institutions in providing drop out support.

2.4.4   Summary

Although a number of considerations 'militate' against comparing drop out data derived from different institutions (Pantages & Creedon, 1978, 56), several useful patterns have been revealed.   While Kennedy & Powell do not dispute the value of such basic research, they point out that "the important question of why students drop out together with the related issues of why they enrol ... in the first place, are left unresolved." (1976, 61).

The next section builds on these early findings to focus on the characteristics of drop outs in an attempt to develop the type of insight for which Kennedy & Powell argue.

2.5 Drop Out: The Student Perspective

Because of the possible effect which drop out can have on the institution's finances, most studies were found to reflect the institutions point of view. However, Johnes (1990) argues, financial costs are only one part of the total costs: drop out also incurs non-pecuniary costs which can only be guessed at. For this reason, Pantages & Creedon (1978) highlight the importance of considering the student's point of view, while recognising that this aspect is difficult to gauge.

This section traces development towards an understanding of drop out, initially focusing on the identification of leaving students.

2.5.1   Characteristics of Drop Outs

Many earlier studies focused on the characteristics of leaving students in an attempt to predict which students might be at risk of dropping out. Hore (1985, 46) noted a tendency of this early research "to place the 'blame' for drop out on the shoulders of the student", questioning their background and ability, their performance, motivation, and commitment.

Two New Zealand studies of this type, that of Hooper (1988) at Massey University, and Jones (1978) at the University of Auckland, typify the findings of many overseas researchers, evidencing inconclusive and contradictory findings in regard to the relationship between student characteristics (such as gender, age and entry qualifications) and drop out.

Gender

Hooper's study of those who failed and those who withdrew within their first year of accountancy found that while women were more likely to withdraw early they were also more likely to

complete the course. These findings confirmed earlier studies, such as that conducted by Demos (1968), which reported that men dropped out at significantly higher rates than women. In contrast, Astin's (1964) longitudinal, multi-institutional study of personal and environmental factors associated with drop out among high aptitude students revealed women had a significantly higher drop out rate than men, and less of them (84% compared to 94% men) stated that they planned to return to college at a later date to complete their studies.

However, Jones' inter-disciplinary study of non-returning first year enrollees indicated that gender was not a factor as men and women stayed away in equal proportions. Similarly Cope & Hannah (1975) found that men and women students discontinue, stop out and transfer in about equal proportions, but for different reasons. They noted that men tended to give reasons related to competency, adequacy or identity searching, whereas women more often gave intellectual, aesthetic and social dimensions. In their extensive review of earlier research, Pantages & Creedon (1978) also concluded that there were no significant differences in the overall drop out rates of men and women, maintaining that the apparent discrepancies of findings could be accounted for by the influence of other factors such as previous education experience or type of institution.

Age

Astin (1975), Anderson & Darkenwald (1979), Hayes (1976), Jones (1978) and Thomas (1985) found mature participants were more likely to drop out or fail to return in a subsequent year of a programme, although Hooper (1988), noted that mature students were more highly motivated and hence more likely to persist.

Hooper (1988) suggested there was a correlation between increasing age and increased likelihood of course completion, or decreased tendency to drop out. Students on vocational courses (such as accountancy) were found to be younger than average and less likely to drop out if they were full time. Hooper found those under 20 years had the lowest drop out rate, although the small number of students in this category suggests some caution as to the generalisability of these findings. Indeed, Pantages & Creedon's review of previous research found drop out rates were similar for students who were either older or younger, concluding that age was not a primary factor in drop out.

Entry Qualifications

Students who achieved well at school generally performed well at University, according to Jones (1978). However, art students were found to be an exception - their chances of successful course completion could not be predicted from qualifications on entry.

While Hooper's (1988) correlation of enrolment data with student University performance did not suggest any significant relationships, students whose records showed a high proportion of past failures were not likely to complete the accounting course either. He found that the number of prior papers completed and the qualifications held on entry were not useful in predicting whether a student would be successful or drop out from their accounting course, findings consistent with Boshier's (1969) earlier New Zealand comparative study (discussed further in Section 2.6.1).

2.5.2   Summary

Research into the characteristics of 'drop outs' provided few consistent correlations. The contradictory nature of these findings is partially attributable to the problematic nature of the definition of terms. A second methodological flaw apparent in many of the earlier studies was the absence of a control group (the persisters) in their research design. The next section summarises key findings developed from comparative studies.

2.6 There are Few Differences Between Leaving Students and Those who Stay: The Results of Comparative Studies

Studies of drop out emphasise differences between drop outs and persisters Hayes (1976) explains, on the assumption that the more marked the differences, the greater the probability of successfully predicting drop out.   Comparative studies appear to have been marked by the influence of sociological[11] thinking in their approach to the problem of student drop out.

2.6.1   Demographic and Socio-economic Characteristics

Drop Outs and Persisters Share the Same Demographic Characteristics

Apart from educational background[12], most of the comparative studies (most recently Knight, 1991) found little to differentiate the two groups in terms of demographic characteristics.

Socio-Economic Status

Although New Zealand is commonly referred to as a classless society (Beatson, 1990), a system of social practices exists, shaping the form of people's daily lives and maintaining a social hierarchy (or class structure) against the vision of equality which New Zealanders have of themselves (Wilkes, 1994). Whilst Beatson (op. cit.) warns of the dangers of equating socio-economic scales (SES), with class, their use can sometimes indicate relationships between various factors and particular groups.

In a review of earlier drop out studies, Summerskill (1962, cited by Pantages & Creedon, 1978) indicated that although socio-economic factors (frequently cited are father's occupation, parental education, family income, and ethnicity) are commonly believed to influence drop out, research has provided equivocal results.

One of the earliest comparative studies was Boshier's (1968, 1969) New Zealand longitudinal study of 252 first year University extension students from a range of programmes. Boshier was particularly interested to ascertain whether the findings of previous overseas studies highlighting the role of socio-economic status were relevant to drop out from higher education in New Zealand, but he concluded that there was little to differentiate drop outs from course participants on these variables, a finding supported by Birch (1975), but at variance with the findings of Anderson & Darkenwald (1979), Hayes (1976), and Astin (1964).

Whilst Hayes' (1976) research at the University of New South Wales concluded that the two groups of students appeared to be indistinguishable when they entered University, a greater percentage of persister's mothers were found to have achieved some tertiary education. Astin found that students who dropped out were more likely to come from lower socio-economic backgrounds. 'Racial' status had little effect on participation in tertiary education although the category they described as 'blacks' was found by Astin to be under-represented because of their low educational status, and 'black' adults were more likely to drop out according to Anderson & Darkenwald. Spoonley, however, is critical of the concept of 'race', noting that the interchange of genes makes "racial boundaries nonsense," (1994, 82) and, he argues, the assumption that physical differences provide an accurate marker of other differences is invalid. Spoonley explains that the notion of ethnicity is more acceptable, classifying people according to their self claimed group affiliations and shared cultural traditions, beliefs and values. A study conducted at the New Zealand Open Polytechnic (Ostman et al., 1988), suggested a relationship between ethnicity and drop out, because more Maori and Pacific Islanders discontinued their studies. These groups were not well represented in the student sample studied, however, raising questions as to the generalisability of these findings.

Few other New Zealand studies appear to have looked at socio-economic variables in relation to drop out from higher education, possibly because of the sensitivity of tertiary students in revealing their own income, or that of parents were applicable, because of current regulations which 'means test' the allocation of student allowances[13].

Whilst Lauder et al's (1985) study of education and social inequity is one which has been criticised for the "regrettable imprecision," (in Beatson, 1990, 90) with which the SES levels of the Elley-Irving scale have been merged and referred to as classes, this work did show that socio-economic status of students' families played a significant role in the level of

educational success achieved by Christchurch secondary school leavers. Because education had already been identified as a key differentiating factor between drop outs and persisters, this finding may add some support to Astin's suggestion that there is a relationship between SES and drop out through the level of education gained prior to entry. Overall, however, no clear relationship between drop out and socio-economic variables is apparent in the literature.

Eckland (cited in Pantages & Creedon, 1978), explains that this lack of correlation exists because the composition of the student population at each institution tends to be relatively uniform with respect to SES, and most studies have been based on a single institution. These contradictory findings were not unexpected, given the diverse cultural settings in which drop out research has been conducted, and the variety of socio-economic scales and concepts applied.

Summary

Few significant differences in demographic characteristics or SES factors were reported between those who left and those who stayed. However, persisters and drop outs were differentiated by their educational experiences, and this notion is further explored together with other academic factors in the following section.

2.6.2   Academic Factors

Previous educational experiences, study habits and level of academic performance on the programme are areas which researchers have explored in order to determine which of the many academic factors are significant in student drop out.

Previous Educational Experience

Anderson & Darkenwald (1979) and Boshier (1969) found that students with fewer years of formal schooling were more likely to drop out. However, Astin (1975) warned that higher education was a long way from being able to identify students who would be unable to cope with the academic demands of tertiary study. For example, while some studies noted positive correlations between qualifications on entry (Jones, 1978) and successful completion of programmes, Hooper (1988) and Tremaine (1979) found that entrance qualifications and previous tertiary education experience had no influence on withdrawal.

Carr & Ledwith's (1980) examination of factors influencing the success of disadvantaged adults beginning studies with the British Open University, Morrison's (1981) analysis of success and failure amongst first year Auckland University students, and Johnes' (1990) study of the effects of academic entry requirements on non-completion at Lancaster University provide more recent evidence in support of Astin's concern. These researchers found that mature applicants, who

often lacked formal academic entry qualifications, were just as likely to succeed in higher education as their school leaver colleagues. Motivation was thought to play the major role in the success of these students and thus, raising academic entry requirements was not supported as a strategy for reducing 'wastage'.

Jones (1978) theorised about the experiences of school compared to University as a factor in student drop out. An analysis of the different requirements of arts compared to other subject areas led him to suggest that prior knowledge of a conceptual framework, ability to problem solve and the flexibility to adapt to the freedom of study (the loose structure of University) were factors likely to be associated with success and re-enrolment in successive years of a programme.

West's (1985, b) longitudinal study of BA students at Monash University (Australia) demonstrated that school leavers were more likely to successfully complete their first year of higher education if they had received most of their secondary education at a government, rather than independent school. These findings (controlled for social background and ethnicity) would seem to offer support to Jones' point regarding the importance of the school environment in preparing students to meet the demands of higher education.

However, Baldwin & Howe (1982) found that previous experience with a subject did not necessarily confer any advantage. Comparison of 498 first year University accounting students, revealed little difference overall between those with a background in the subject and those without, in either exam performance or drop out rate. However, students who had taken accounting at high school tended to drop out late in the semester, suggesting they may have been over confident at the beginning and unprepared for the extra effort required as new and more rigorous topics are introduced.

Level of Academic Performance on the Programme

"All or even most of the potential drop outs cannot be identified and, therefore, eliminated before applicants enrol", Pantages & Creedon (1978, 64) explain and, thus, many researchers turned their attention to predicting drop out after enrolment. Summerskill (op. cit..) found a highly significant relation between drop out and first semester grades in all 35 studies he examined. This finding was supported by Pantages & Creedon's analysis of later research, leading them to conclude that good grades function as effective reinforcers in maintaining and strengthening a student's academic performance, and, thus, decreasing their chances of dropping out. Astin's (1975) comprehensive cross-institutional study yielded similar results, supporting the notion of a correlation between achievement and persistence, although grades did not always indicate academic potential and many with very high potential dropped out. High grades were thought

by Astin to correlate with persistence because they affected motivation. They appeared to influence persistence directly, independent of initial variations in ability and family background, financial aid, employment during study, residence and type of institution.

Although Astin's (1975) study found only one quarter of the respondents attributed withdrawal to academic difficulties, other reasons may have been 'handy rationalisations' for drop out because of poor performance, he said. Counsellors interpretations of the reasons for drop out in Demos' (1968) study would support this view, although he maintained that poor grades per se did not cause the student to withdraw.

Expressed variously as course "too advanced", or course "too hard", poor academic performance was highly rated amongst the reasons given by respondents in many later drop out studies, notably those conducted in New Zealand polytechnics (Ostman et al., 1988; Polyview Teaching and Learning Taskforce, 1984). Schedvin's (1985) study found that more than one third of the first years who discontinued were students for whom academic difficulties gave rise to such an acute fear of failure, that they withdrew rather than face it. These findings raise questions regarding the level of learning support given to students.

Study Habits

Astin (1975), Ostman et al. (1988) and Pantages & Creedon (1978) reported that the most drop out prone students had poor study habits. Although Garrison (1985, 31) noted that "... persisters worked a greater number of hours than drop outs", some studies found there was little difference in hours spent on study between stayers and leavers (Jones, 1978, and Tremaine, 1979). Jones found that a large number of students who did not re-enrol had performed poorly in their end of year examinations and although this may have been a reason for not continuing, the student may already have 'given away' the idea of continuing before the exams and hence performed poorly.

Summary

Whilst academic variables have been described as the strongest single-variable predictors presently available in the study of drop out, (Pantages & Creedon, 1978), the level of academic performance whilst actually on the programme, measured by assessment grades, was the only factor able to provide a consistent relationship with drop out. However, Pantages & Creedon (1978, 65) conclude, poor grades are not generally sufficient "in and of themselves to cause attrition, but must be coupled with other non-intellectual factors". Thus, it appears that, although academic factors are an important group of variables affecting success in tertiary study, they are

not the only variables that contribute to drop out. The influence of advances in psychology[14] becomes apparent as researchers turned their attention to psychological and situational differences between those who leave and those who persist on a programme, in order to make progress towards understanding drop out.

2.6.3   Psychological and Situational Variables in Drop Out

Iffert (1957) and Summerskill (1962), both cited by Pantages & Creedon (1978), documented that the most prominent reasons given by drop outs in their decision to leave were motivational. Students' own expectations (influenced by their level of aspiration, fear of failure and parental attitudes), their reasons for attending tertiary education (including their educational interests and career goals) and peer group influence were areas of motivation Pantages & Creedon (op. cit.) found previous studies had touched on, although they considered that earlier researchers had failed to establish relationships among levels of motivation, commitment to the institution, strength of educational goals and drop out. More recent research explores these, and other psychological aspects, further.

Reasons for Studying

Several writers have suggested that the reason for study (Astin, 1975; Boshier, 1973; Hibbett, 1986; Hunt, 1982) is an important factor in persistence/drop out and in overcoming any difficulties encountered. Some of the wide variety of reasons students indicated for attending University were also found to be related to re-enrolment probability, including the desire to qualify for a well paid or interesting job, interest in the subject and to have a 'good time'.

Jones (1978) found career orientation to be a powerful incentive for re-enrolling at University for all students. West et al. (1987) suggest that student drop out may not be a sign of failure but an indication of a re-evaluation of career goals or an assessment that tertiary education is not for them.

Students who chose subjects at University because they found them interesting at school, or because they were good at them, were more likely to continue within a year (Hooper, 1988) or to re-enrol in a subsequent year (Jones, 1978).

Interestingly, Jones found those who rated "having a good time" as an important reason for continuing were more likely to return to complete subsequent years of a programme especially in the non-arts areas. This finding contradicts the 'common-sense view' which predicts poor performance for students who are out to 'have a good time'.

Whilst many studies which aimed to ascertain the reasons for leaving a programme also looked into reasons for joining the programme, the assumption that these aspects are related was

rarely challenged. Similarly, the factors involved in the initial decision to join a programme may not be the same as those involved in the decision to re-enrol for subsequent year on a longer programme. The reliability of the data in many studies is also questionable, as subsequent events may influence students recollections of reasons given for both enrolling and leaving.

Course Choice and Commitment

De Rome & Wieneke's (1982) longitudinal study of 1,375 first year students at the University of New South Wales made a significant differentiation between persisters and drop outs: it appeared that drop outs were more likely to have enroled under less than propitious conditions, although few other differences were noted.

The study revealed that the University of New South Wales was the first choice of persisting students - they had consulted relevant publications when making enrolment decisions, and they had a long-standing commitment to the course.

Students who had left within two months of their initial enrolment were less likely to have had that University as their first choice. They tended not to have consulted publications or career advisors when making enrolment decisions, and they were not particularly committed to their course, indicating they would leave if they found employment. Students who left because of failure to meet minimum requirements to continue, were also more likely not to have consulted prior to enrolment. Thus, the quality of information received prior to enrolment and the students' commitment to the programme are factors which may be associated with withdrawal.

Satisfaction

In a follow up survey, de Rome & Wieneke (1986) found the content of courses was not as expected by almost half the respondents: persisters were likely to refer to differences in emphasis or workload, and drop outs to poor teaching or the course being less interesting than they had expected (also noted by Hibbett, 1986, and Hooper, 1988). A proportion of both persisters and drop outs in this study were not satisfied with their course.

Anderson & Darkenwald (1979) maintain that the most powerful predictor of persistence in adult education is satisfaction with the learning activity in terms of its helpfulness in meeting the students objectives. However, this simplistic measure of satisfaction did not allow for complex responses, for explanation, nor for any distinction between types of satisfaction. Satisfaction appeared to account for a small part of the drop out equation, with only 10% of drop outs reporting dissatisfaction as a reason for leaving the programme.

Motivation

The association between motivation and drop out has been suggested by many writers, notably Birch (1975), Boshier (1973), Hayes (1976, 1977) and Jones (1978).

Hayes' concluded that drop outs could "not be considered as a group with homogenous characteristics differentiating them from persisting students," (1977, 148). She argues that the term 'drop out' must be seen as encompassing a wide range of personal characteristics, motivations, and reactions.

The association between drop out and personality factors suggested by Hayes was also the subject of Boshier's (1973) study. Using students' self reported motivations for attending continuing non-credit classes in New Zealand as the basis for his analysis of both participation and drop out, Boshier concluded that both stemmed from an interaction of internal psychological and external variables. Students fall into two groups according to whether they are 'deficiency' or 'growth' motivated to participate, he theorised. Calling on Maslow's (cited in Boshier, 1973) motivational typology, Boshier defined deficiency motivation as synonymous with self/ideal (or intra self) incongruence which he maintained leads to self/other incongruence and dissatisfaction with the education environment. He argues that the social, psychological, and institutional variables typically identified by drop out research "mediate the congruence/drop out relationship", triggering drop out if incongruence has developed (1973, 261). Whilst this theory appears to explain why individuals subjected to similar circumstances have different responses, why one person persists and another drops out when, for example, a course tutor or venue has been changed, this classification of students has yet to be supported by indepth research which tests for psychological variables. Boshier claims that the reasons for non-participation and drop out do not reside exclusively within the participant, however, and his suggestion that administrators consider the motivations (needs) of students when organising educational experiences for adults acknowledges the role of the institution in drop out.

Motivation was also the focus of Birch's (1975) longitudinal study, conducted at the London Royal College of Nursing. By following the training paths of 136 nursing students from eight general training hospitals, Birch found that motivation amongst students on entering nurse training was high, but that it was not sustained over the training period, suggesting an association between drop out and change in motivation, a point highlighted by Jones' (1978) New Zealand study also. Through the use of standardised tests, this study revealed that, although there were some interesting differences between those who completed training and those who dropped out in terms of intellectual and personality variables, leavers were "not all that different from stayers, save that they could be described as more vulnerable" (1975, preface).

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Summary

Drop outs and persisters were found to react to pressures in their tertiary education career in different ways, because of individual differences, including personality and past experiences.

Several writers suggested links between motivation and drop out, exploring reasons for joining the programme, the process of selecting a course and other factors which might influence a student to persist with their studies.

Besides motivation, other psychological factors such as satisfaction and commitment were identified and, although various studies supported the notion that aspects of an individual's psychological orientation were related to drop out behaviour, in each case the significance of the findings was relatively small, suggesting that other factors were also involved. Cope & Hannah (1975, 103) conclude that there is no "drop out personality, only individual personalities interacting with different campus environments, at various times in their mutual and changing lives", a view supported by Birch's (1975) work.

Many of the previous investigations conducted to formulate the profiles of participating and withdrawn students were based on the assumption that "drop out is in some way an extension of non-participation" (Boshier, 1973, 256). Echoing these words, Garrison (1985, 26) maintained that the inability of past research to explain and predict drop out can be attributed to this implicit assumption, although there was little empirical evidence to support a conceptual link between participation and drop out, he said. Indeed, Anderson & Darkenwald (1979, 36) argue that "... many of the variables that affect participation have little impact on persistence.".

Thus, the focus of researchers turned away from the characteristics of individuals to exploring their reasons for leaving in a search for the cause of drop out. This re-orientation saw a greater emphasis on institutional, social and academic factors than was previously apparent.

2.6.4 Why Students Leave or Fail to Return to Study - A Search for the Cause of Drop Out Through the Perceptions of Students and Significant Others

There are several ways in which reasons for withdrawal have been investigated. West et al. (1987) found that students have been asked to specify their main reasons, to rate the importance of a set of given reasons, or interviewed indepth to uncover their reasons. In some studies the perspectives of significant others have been collected and analysed to try and shed light on the phenomenon of student drop out. This section summarises the outcomes of key studies selected to illustrate each of these investigation modes, whilst attempting to knit the findings from this phase of the research continuum with the research findings discussed in the preceding sections.

Reasons for Leaving

In the multitude of studies which sought the reasons for student drop out, almost every imaginable reason has been described, according to West et al. (1987). Indeed, Tremaine (1979) comments that there seems to be as many reasons for withdrawal as there are respondents. From the many studies of students reasons for dropping out, however, a fairly common set of responses emerged. Tremaine's grouping of responses into "fate", "foreseeable" and "institution related" factors has been selected as a useful categorisation because "they are relevant to the kind of assistance which might help students who withdraw" (1979, 30).

(a) Fate

Many studies, including those conducted in New Zealand polytechnics (Ostman et al., 1988; Polyview Taskforce, 1984), found external reasons beyond the control of the respondent "fate" were amongst the most commonly cited for dropping out. Accident, ill health, job transfer, financial, and personal and family problems were 'acceptable' reasons frequently cited according to Schedvin but "their importance dwindled on closer inspection" indepth discussions disclosed (1985, 172). Almost all of the problems reported as reasons for withdrawal by students who left were found to be shared by large numbers of students who did not withdraw, Hackman & Dysinger's (1970) comparative study revealed. Similarly Hayes' (1976) study also suggested that drop outs and persisters experienced similar problems, although Hibbett found that early drop outs expected, and indeed, experienced, more problems than other students.

Mature students and women were other student groups which appeared to experience a higher level of problems outside their control. Smith (1987) argues that changed circumstances exacerbate the conflicts which almost inevitably exist for mature students between study, work, and family responsibilities, confirming the earlier findings of Birch (1975) and Boshier (1969). Astin (1975), Demos (1968) and Hibbett (1986) noted gender differences in responses, with women more commonly citing family responsibilities as a major factor in deciding to leave, reflecting traditional role differences still prevalent in society. These findings support the call of previously cited researchers for the disaggregation of drop out data (Section 2.4.3).

Many writers, most recently Knight (1991), maintain financial and personal reasons represent socially acceptable attributions, rather than the 'true' withdrawal factors identified by Tinto (1982). Although the majority of previous studies found lack of finance was not a major factor in drop out, this conclusion is probably reflective of prevailing economic conditions. Roberts et al. (1991) warn that finances are becoming a major determining factor in the decision to withdraw.

(b) Foreseeable

Tremaine describes 'foreseeable' reasons as those which could have been anticipated by the student (1979,30). Many foreseeable reasons are related to 'lack of time' which was frequently identified as a major concern, posing both a barrier to participation (Woodley and McIntosh, 1977), and to persistence in a programme (Hooper, 1989; Ostman et al., 1988; Tremaine, 1979). Sometimes the 'lack of time' factor was expressed as a conflict of interests, of time to study versus work commitments and family responsibilities, as noted previously. These conflicts between study and work/domestic pressures were less likely to be surmountable for the part-time student, thus, explaining why drop out for part-timers was found to be higher than for full-timers (Section 2.4.3). Anderson & Darkenwald (1979) and the Polyview Taskforce (1984) highlighted the length of the programme as a factor related to drop out, with shorter programmes, or programmes broken into shorter 'chunks' (modularised into units of learning), having higher persistence rates, because they were easier for part-time students to organise their time around.

However, Woodley & McIntosh (1977) claimed that lack of time reflected an unwillingness to give up other family and social activities for study, providing an indicator of the level of a student's goal commitment, a view supported by Smith (1987) and Bartels (1985). Hooper (1989) also considered that the time factor masked other underlying problems and that students who claimed to 'lack time' lacked commitment or ability to cope with the course content. The stress of first assessments appeared to bring time problems to a head, explaining why peak withdrawal periods were found to be related to the timing[15] of first assessments.

(c) Institution Related

Bradley et al's (1990, 111) investigation into the concerns experienced by students from Australian tertiary institutions also found that assessment deadlines were stressful factors, along with the number and size of assignments, sitting examinations and low results from assessments. Many of these factors are exacerbated by the way an institution organises and conducts its academic activities, although institution-related factors were generally the least commonly cited category of reasons students gave for leaving.

There were some exceptions, however. Congruent with Johnes' (1990) work at Lancaster University, Bradley et al. found that respondents were more concerned over academic and course-related matters than personal problems.

Tremaine (1979) observed that students who met the entry criteria tended to withdraw for institution associated reasons, whereas provisionally admitted students (mature students who

did not meet the standard entry criteria) were more likely to withdraw because of personal problems, illness, and family commitments or work pressure not allowing enough time, findings supported by Garrison (1985) and Smith's (1987) studies of foundation programme drop outs.

Whilst the reasons students gave for leaving in Demos' (1968) study were generally attributed to fate, counsellors thought these were less important than lack of motivation, or difficulty with the course. Schedvin (1985) noted, however, that fear of failure often resulted in severe stress and frequent illness, 'excusing' an intention to discontinue.

Anderson & Johnstone's (1983) Australian study, (cited in West et al., 1987), of both full-time and part-time drop outs generated 56 main reasons of which the most important (and most commonly cited at 41%) institution-related reason was failure of the course to meet students requirements. This theme was variously expressed in the findings of other researchers as problems with the course or its organisation (Boshier, 1969), boredom (Astin, 1975), or dissatisfaction with the course (Ostman et al., 1988) and its tuition (Katz & Barrett, 1972; Woodley & Parlett, 1983). This category of student responses included problems of adjustment to student life and dissatisfaction with the size of the institution (Astin, 1975), its social (Ostman et al., 1988) and/or academic environment. These results must, however, be viewed in the context of those generated by comparative studies in which persisters have been found to complain (Jones, 1978), and drop outs to have reported they were not unhappy with their programmes (Anderson & Darkenwald, 1987; Smith, 1978) even though they had withdrawn[16].

Jones (1978) categorised leaving students into two main types: those who were happy with their learning experience but unable to continue their study temporarily due to personal circumstances, and those whose negative experiences had soured the idea of ever returning. He maintained that institutions should be particularly concerned for this last group, a view shared by Ostman et al. (1988) who claim that, of all of the categories of factors influencing a student's decision to withdraw, 'institutional' is the most significant because while it is not the most commonly cited, it is within an institution's power to redress.

Limitations of this Approach

There is an extensive body of literature which attempts to understand the leaving behaviour of students from the reasons that they themselves give. There has been much debate regarding the real significance of these reasons (Pantages & Creedon, 1978), especially in the case of ex post facto investigations, as outlined in Section 2.2. Whilst most drop out studies reported external factors as the predominating reasons for withdrawal, Kennedy & Powell (1976, 69) noted that drop outs "often have a demoralising history of educational failure and bring feelings of insecurity and educational and intellectual inferiority to their studies". Such findings lead

others, such as Boshier (1969), Knight (1991) and West (1985, a), to question the honesty of the reasons given, and to suggest that students' self-reported reasons were socially acceptable attributes not the real causes of withdrawal. Kennedy & Powell (1976) were also concerned with the validity of information gained from students because of the negative connotations associated with dropping out.

A number of studies evidenced the application of triangulatory techniques (Denzin, 1988) gaining the perspectives of other key informants such as tutors and counsellors, in an attempt to produce more valid, 'whole' data on drop out while still retaining the students' point of view as the focus. (Examples include Birch, 1975; Demos, 1968; Kennedy & Powell, 1976; Knight, 1991; Tremaine, 1979; West, 1985, a).

Hayes (1976) had similar reservations regarding the validity of students' self reported reasons for leaving, explaining that there were probably no difficulties encountered by drop outs which had not also been encountered by persisters. However, Garrison (1985) argues that similar experiences appeared to affect individual students differently, and this suggests that interaction effects may account for some of the persistence/drop out variance.

Tremaine's analysis (1979) of the methodologies of previous drop out studies revealed that the most common way of collecting information was to ask students their reasons for withdrawal. Because they are stated briefly, reasons given by students in official applications to withdraw, or in response to questionnaires, tended to simplify the grounds for leaving, Schedvin (1985) found, giving the impression that drop out resulted from a single cause. It was evident that the phenomenon of student drop out was not a simple cause and effect, but a complex process influenced by an interaction of many factors. Woodley & Parlett (1983, 20) suggest that drop out results from an interplay of 'push' and 'pull' factors, but when students were asked why they dropped out, they tended to give the most important or else the most recent factor.

Thomas (1985) argues that most of this research is of little value in predicting withdrawal from study or in understanding the reasons for discontinuance - "the measures are too crude and 'convenience' reasons are accepted in preference to the considerable commitment necessary to establish 'real' reasons" he explains (1985, 39). As a result of their analysis of recent Australian studies, West et al. (1987, 8) conclude that none "supplied unequivocal answers" to the question of why students withdraw. Indeed, they noted that some studies using the same students but different techniques produced different outcomes, a finding attributed to the failure of researchers to separate different types of students. The different reasons expressed by early leavers compared with those who drop out later in the programme, (Section 2.4.3), provides an example of the need to disaggregate drop out data by student type.

Summary

Through seeking students' reasons for leaving, a multitude of factors thought to influence drop out were identified. Of these, factors outside the control of the student "fate" and lack of time (a foreseeable reason) were the most frequently identified by students themselves. However, it appears that institution-related reasons, particularly those resulting in, or associated with, poor academic performance, are more important factors in drop out than many studies indicated. Indeed, the exploration of why students leave a programme prior to completion revealed the drop out process to be more complicated than the simple cause/effect relationship implied by students' reported reasons. However, Tinto (1975) emphasised that knowing which variables relate to drop out does not explain how these variables influence drop out, nor why a student demonstrates any particular form of leaving behaviour. Tinto stressed the necessity for developing a conceptual framework in order to understand the processes that lead to drop out. Drop out research has revealed that "... the population of students withdrawing ... is not homogeneous," (Getzlaf, Sedlacek, Kearney & Blackwell, 1984, 258). Any conceptualisations of drop out must, therefore, take into account not only the complex, multitude of variables influencing it, but also the heterogeneity of the student population. The next section briefly describes some of the theories and models developed to take account of the observations and findings of previous research.

2.7 Theories to Account for the Complex Process of Drop Out

Kerlinger (Cited in Kember,1989) defines theory as a set of inter-related concepts, definitions and propositions that present a systematic view of a phenomenon by specifying relationships among variables with the purpose of explanation and prediction.

Boshier maintains that the absence of testable theory has "crippled adult education participation and drop out research for decades" (1973, 255). However, in recent years, researchers have begun to turn to conceptual frameworks to account for causal factors and interactions among competing factors (Cookson, 1989), shifting from a concern with drop out rates to drop out process.

Some of the early models such as that proposed by Kennedy & Powell (1976), were merely correlational, describing rather than accounting for, the variables associated with drop out. The early stages of model development, borrowed heavily from the physical sciences[17] with drop out conceived as the result of an 'imbalance' in the equilibrium between the characteristics of students and their circumstances. Although these semantic models have been criticised for their lack of explanatory and predictive power, they provided the foundation from which successively more sophisticated models have been developed.

Two major conceptualisations of the drop out phenomenon have underpinned recent model building development. The first of these, what will be termed the 'integration' theories, were based on sociologist Emile Durkheim's (1961) study (cited in Tinto, 1975) of social patterns of suicide late last century. Tinto's (1975) model is probably the best known of these.

A second major category, the 'investment' models, developed by Bean (1980,1985), Bean & Metzner (1985), and Schell & Thornton (1985), had their foundation in studies of employee turnover, with factors affecting employee retention in industry, such as commitment and satisfaction, applied to student persistence in educational institutions. Although these two major conceptualisations of drop out had their origins in different domains of the social sciences, certain similarities evolved as the models depicting these two theories were empirically tested in the field and modified in light of experience. The next two parts of this section are devoted to each category in turn, selecting for discussion first models developed by Tinto and his followers, as much of this work preceded that of Bean, Metzner, Schell and Thornton.

This section concludes with a description of Powell et al's (1990) model which appears consistent with many of the ideas developed from the merging of these two schools of thought, capturing the current notion of drop out as a complex process influenced by a multitude of interacting factors.

2.7.1   Tinto's (1975) 'Integration' Model

Tinto (1975) combined 'cost/benefit' economic analysis with social psychology and consensus sociology, through the application of Durkheim's (1961) 'integration' theory (op. cit.), to develop a model able to account for types of drop out behaviour among differing individuals.

Tinto's model was designed to take account of drop out behaviour observed in studies of younger (18-24 age) full time students attending conventional two to four year residential institutions in the United States.

Central to Tinto's model is the notion of 'integration' with respect to both the social and academic systems of the institution. Tinto argued that an educational institution is a social system with its own value and social structures. Drop out from this system may have parallels with suicide as a form of 'drop out' from the wider social order. Durkheim (op. cit.) believed suicide was more likely to occur if two forms of 'integration' were lacking, namely value 'integration' (normative congruence) and collective affiliation (a feeling of belonging).

Tinto's (1975) model built on Durkheim's 'integration' concept to portray drop out as a product of individual characteristics interacting with the institutional environment. Individuals bring with

them personal attributes (gender, 'race', ability), previous experiences (qualifications and academic and social attainments) and family background (social status, values and expectations). Later researchers, working with different student groups, notably Kember (1989), found home and work commitments were also important aspects of the characteristics component of the model. Individual characteristics interact with the social and academic environment, resulting in varying degrees of integration. As a consequence of experiences during these interactions, the student re-evaluates their educational expectations, resulting in changes to their goals and commitment to the institution which, in turn, determine continuation at the institution or varying forms of drop out. These relationships are shown as linked pathways in Kember's adaptation of Tinto's (1975) model (Figure 2.1).

FIGURE 2.1

KEMBER'S (1989, 197) ADAPTATION OF TINTO'S (1975) 'INTEGRATION' MODEL TO ACCOUNT FOR DROP OUT.
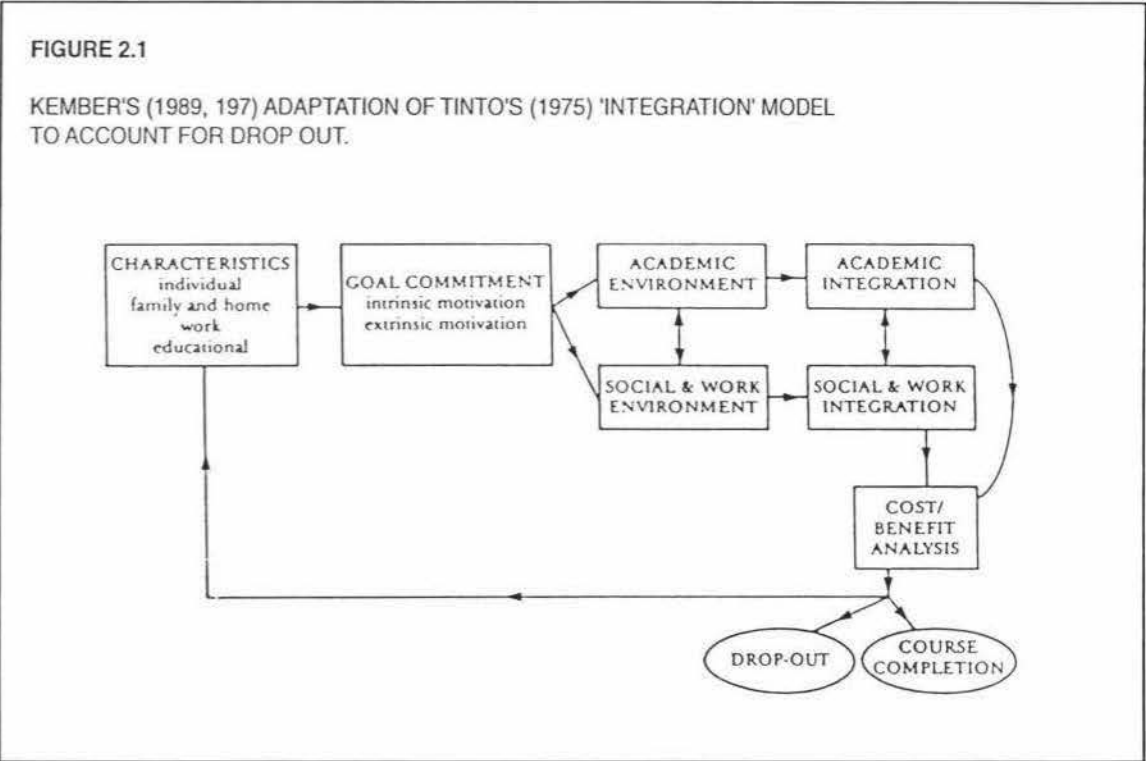
Interaction with the academic environment occurs through interactions with staff and other students, and leads to a degree of academic 'integration' reflected by students academic performance (grades) and their intellectual development. Tinto considers that grades are both a reflection of the person's ability and a measure of the degree of conformance to the institution's preferred style of academic behaviour, explaining why many previous studies have shown grade performance to be the single most important factor in predicting persistence.

Social 'integration' occurs primarily through positive encounters in peer group associations, with extra curricula activities and interaction with tutors and administrative personnel of secondary importance. Tinto maintains that the social rewards which result from communication,

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friendship, support and a feeling of belonging become part of a student's generalised evaluation of the costs and benefits of tertiary study which determine the likelihood of persistence in the programme. Educational goal commitment, a term used by Tinto to describe the level and intensity of educational expectation (a diploma or degree) is considered to be directly related to persistence. A predisposition to attend one institution rather than another, an individual's institutional commitment, incorporates the 'dispositional', financial and time commitments students make when they enrol. This commitment must be maintained in order for students to continue at the institution.

The interplay between varying levels of goal and institutional commitment and the characteristics of the institution can be used to explain differing patterns of transfer between institutions. Individual decisions to leave the programme are also affected by external events, although Tinto maintains that these influences are manifested through a student's re-evaluation of their commitments. Borrowing from the field of economics, Kember, (1989) and Roberts et al. (1991) made more explicit the cost/benefit aspect of the model. They argued that individuals direct their energies towards activities which maximise the ratio of benefits to cost over a given time so that a student would withdraw from the institution if they perceived that an alternative form of investment in time, energies, or resources would give them greater benefits than continuing in the programme (Figure 2.2).

FIGURE 2.2

'COST/BENEFIT' ANALYSIS (ROBERTS ET AL., 1991, 58)
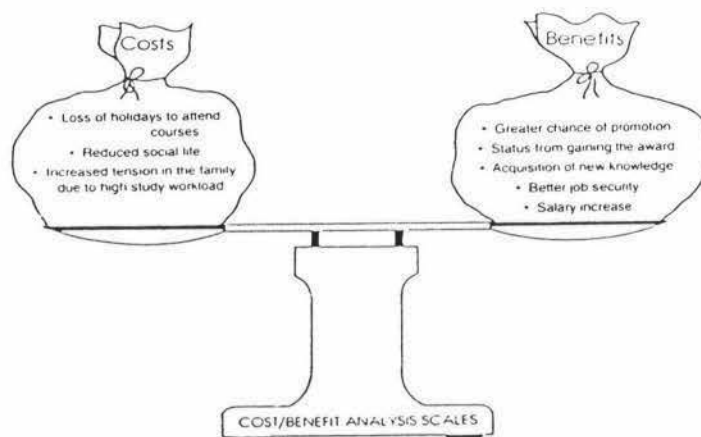
Tinto concluded that since drop out is the outcome of a multi-dimensional interaction between the student and the institution, the characteristics of the institution determine the development and 'integration' of students within it, affecting the academic and social climates or "presses" with which the individual must come to grips. However, the effects of institutional characteristics on drop out do not appear to have been as well researched as individual effects, a view shared by New Zealand writers Ostman et al. (1988) and Jones (1978).

Applications and Limitations of Tinto's Model

A major critique of the model, according to Bean (1980), is that there is no evidence to support the parallel drawn between dropping out of higher education and the social act of committing suicide. On a broader level it is important to recognise that the consensus approach, which Durkheim (op. cit.) used to explain suicide as a social phenomenon, is itself subject to serious challenge by other major players within the discipline of sociology. Indeed, the consensus approach appears to have been out of academic favour since the 1960's (Bottomore, 1962). Whist such concerns have implications in considering the usefulness of Tinto's model, studies conducted over the last two decades with a variety of students across a range of institutional settings have led a number of researchers to conclude that the model provides a potentially useful framework for understanding the processes of student drop out and persistence (Baumgart & Johnston, 1977; Hayes, 1979; Roberts et al., 1991; Stage, 1989; Sweet, 1986) and to generally confirm its predictive validity (Pascarella & Chapman, 1983).

However, the application of sophisticated statistical techniques has demonstrated that the model is able to account for no more than 20% of the variance in persistence in any particular study. The homogenising of students responses (Stage, 1989; Hayes, 1977; Bean, 1980 & 1985), the interaction effects of variables (Bean, 1980, Powell et al., 1990), and poor operationalisation of the variables (Pascarella & Chapman, 1983), have been suggested as reasons to account for this. Pascarella & Chapman argue that the model may not take into account all the variables, adding that "perhaps a major portion of persistence/withdrawal behaviour is so idiosyncratic, in terms of external circumstances and personal propensities, that it is difficult to capture in any rational explanatory model," (1983, 99). They, therefore, suggest a need to disaggregate by institutional type.

Another problem which Tinto (1975, 1982) himself alludes to, is the failure of drop out research to resolve questions related to the definition of drop out populations. Tinto acknowledges that his model does not adequately distinguish between behaviours that lead to transfer and those that lead to permanent withdrawal from higher education.

Many of the researchers testing Tinto's model conducted studies of single institutions (Baumgart & Johnston, 1977; Getzlaf et al., 1984; Hayes, 1977; Kember, 1989; Roberts et al., 1991; Sweet, 1986) and while the data generated is useful to the institution under study, global patterns were thought to be more readily apparent in cross-institutional studies such as that conducted by Pascarella & Chapman (1983) across 11 institutions (including two year and four year residential, and four year commuting), and Taylor et al. (1986) across five countries. Although the findings from cross-institutional studies were generally consistent with Tinto's theoretical expectations, the degree of influence of components was found to vary between

'commuting' and 'residential', and between 'two year' and 'four year' institutions in terms of social and academic 'integration' and institutional commitment. Whilst Tinto argued his model can be easily modified to take account of different forms of attendance it was not readily suited to the study of drop out at institutions "where forms of institutional communities are tenacious at best," (1982, 693).

Tinto's model focused on the role of the institution in the drop out process. However, McIntosh & Morrison (1974, cited in Schell & Thornton, 1985) argue that not all of the blame should be levelled at the institution for failing to perform its job. Calling on research done at the Open Polytechnic (United Kingdom), they highlighted the fact that a proportion of students always drop out for reasons which have little or nothing to do with the institution.

Tinto's model does not appear to allow for consideration of these non-institutional reasons. It does not address the influence of individual students backgrounds and characteristics, other than as they interface with the academic and social systems of the institution in which they are participating. The model, therefore, fails to highlight important differences in the education experiences of students of different age, gender, ethnicity and social backgrounds. Even with Kember's modifications the model does not adequately take into account external forces such as financial pressures or the influence of friends, family or work outside of the institution. Tinto acknowledges that his 1975 model "does not give sufficient emphasis on the role of finances in student decisions concerning higher educational persistence," (1982, 689), a feeling echoed by Roberts et al. (1991) who note that economic changes have increased the financial burdens of study.

It was in order to address the influence of these external factors that Bean (1980,1985), Bean & Metzner (1985), and Schell & Thornton (1985) developed their 'investment' theories. While these models are consistent with the work of Tinto, a different theoretical conceptualisation of the process underpins them and this is discussed in the next section.

2.7.2   Commitment, Satisfaction and Reward in Student Retention and Drop Out

The 'investment' theories seek to explain student drop out behaviour by applying various motivation concepts such as commitment, satisfaction, and reward, which had evolved from studies of employee retention in industrial settings. A basic assumption underlying the application of these theories to drop out research is that student withdrawal from tertiary institutions is analogous to turnover in work organisations, with reasons for leaving study being similar to those for leaving work.

The 'Investment' Model: Schell & Thornton (1985)

Schell & Thornton (1985) tested the concept of job commitment in an educational setting to ascertain its applicability to the processes involved in student persistence and withdrawal.

The 'investment' model (Figure 2.3) asserts that satisfaction with a programme, indicated by student evaluation, would be highest when the student perceived the programme offered high rewards and low costs. Rewards in an educational setting were thought to include understanding and application of course content, and enjoyment resulting from hard work and achievement. Costs included loss of leisure time and lack of tutor contact and feedback. They thought that declining educational rewards, increased programme costs or the availability of attractive alternatives, could lead to reduced programme commitment and, subsequently to withdrawal from the programme.

FIGURE 2.3

THE INVESTMENT MODEL: SCHELL & THORNTON (1985, 55)
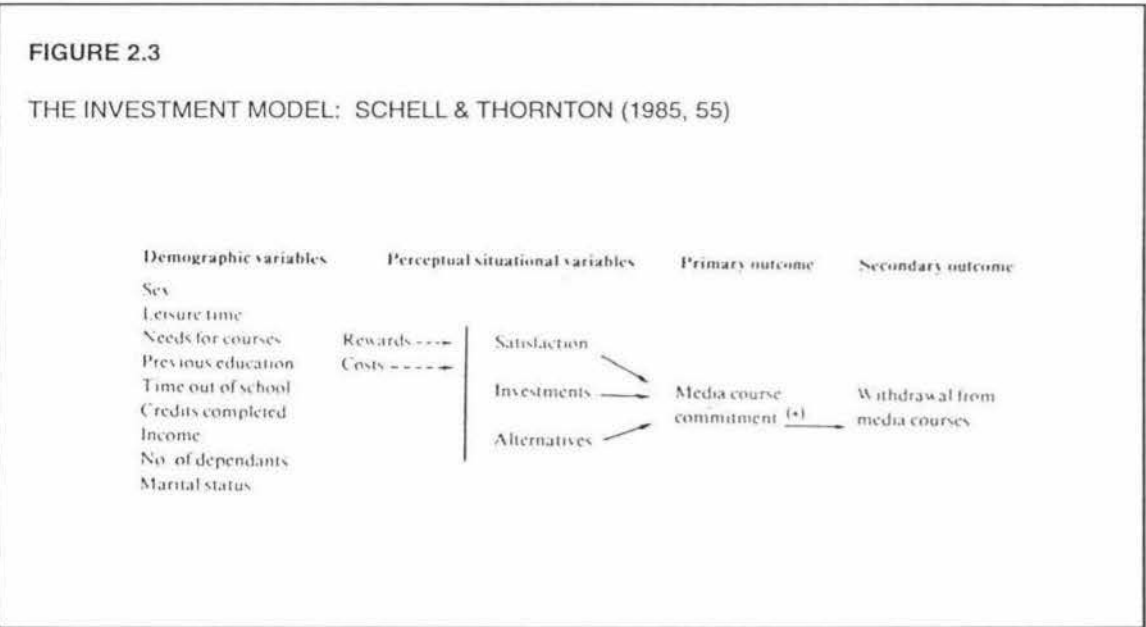
A survey designed to test this model revealed commitment to be the most significant of the factors influencing persistence/drop out amongst distance learners from Laurention University Federation. This study found that highly committed students were those most likely to persist: they were interested in the programme in which they were enroled in. They felt rewarded and satisfied with their study experience. Those who stayed in programmes were not necessarily satisfied students, but were nonetheless goal-oriented individuals who remained until graduation regardless of the perceived costs. While these findings appeared to give some support to the applicability of the concepts of commitment and satisfaction in the development of an explanation of student drop out, there were few alternatives available to these distance students and hence no valid conclusions could be reached on this aspect.

Organisational Determinants, Satisfaction, Institutional Commitment, and Drop Out: Bean, 1980

Bean also based the models he developed to account for drop out on findings derived from studies of turnover in work organisation and, so, similarities are apparent between his work and that of Schell & Thornton (1985) in the focus on satisfaction and commitment and links with rewards. Drop out is the result of a 'cost/benefit' analysis according to Kember's (1989) adaptation of Tinto's (1975) model and implicit in the work of Schell & Thornton (1985). Bean's notion of 'drop out syndrome' as a "conscious, openly discussed intention to leave an institution, coupled with actual attrition," (1985, 36) is a theory owning less to economics than to psychology in its source, although the connections between rewards and satisfaction are evident, especially in his earlier work (Bean, 1980).

Bean's research focused on how organisational determinants affect student satisfaction and in turn influence drop out. He suggested that grades achieved, degree of personal development, institutional quality and the utility of education in gaining employment were analogous to pay in rewarding students for performance. These 'rewards' were considered to influence the level of satisfaction experienced by students and hence their commitment to the institution (Figure 2.4).

FIGURE 2.4   ORGANISATIONAL DETERMINANTS, SATISFACTION, INSTITUTIONAL COMMITMENT AND DROP OUT

Source: Bean (1980, 158)
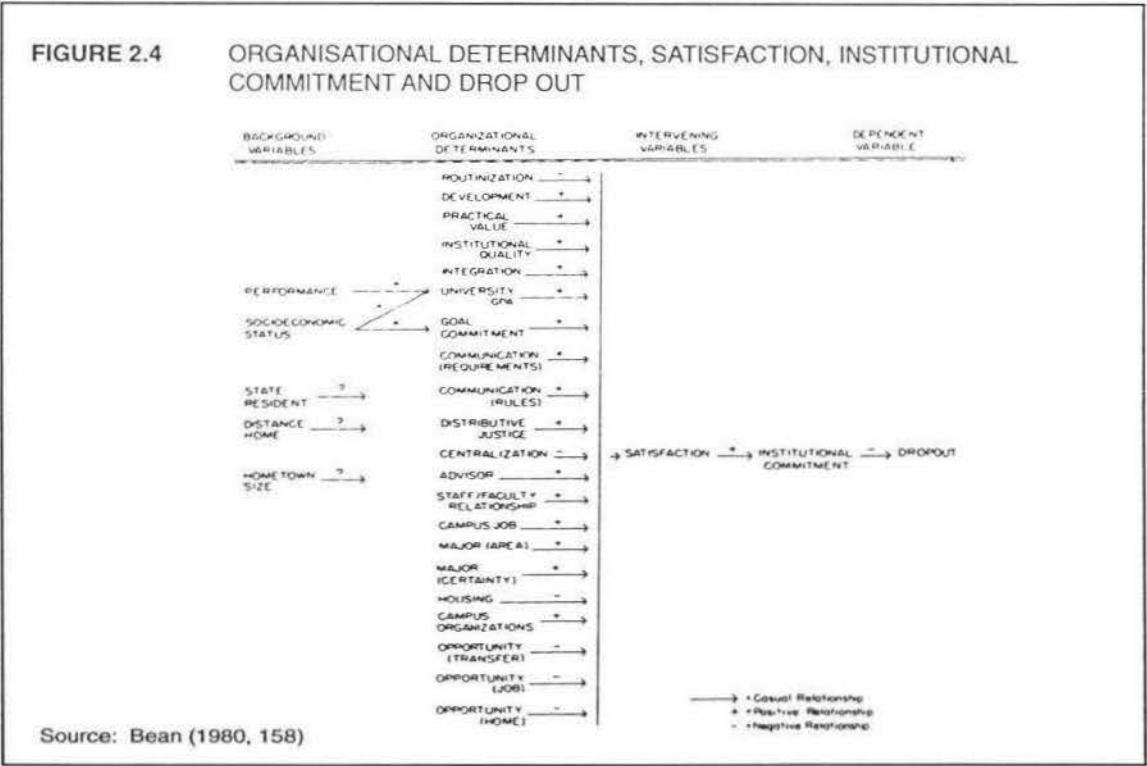
Bean's research at a Midwestern University found that institutional commitment was the most significant factor influencing a student's persistence in, or drop out from, their programme of study. Bean stressed that an individual's background and past experiences must be taken into account in order to understand their interactions within the environment of the institution,

supporting the findings of earlier writers (Kennedy & Powell, 1976; Boshier, 1973). The ordering of variables in Bean's model was based on Fishbein & Ajzen's (1975) theory (cited in Bean & Metzner, 1985) which held that attitudes lead to intentions and then to behaviour. However, Bean's 1980 model failed to account for any more than 20% of the variance in drop out, leading him to question whether some environmental variables and personality indicators might create interaction effects or be significant in their own right. Bean was particularly concerned with the area of intervening variables and, so, subsequent research over the five year period till 1985 saw Bean modifying this basically descriptive model to take into account findings about the relationship and significance of these variables.

Selection and Socialisation: Bean (1985)

Bean (1985) considered that many outcomes of higher education resulted not from the organisational environment but from institutional selection of students who already possess these desirable outcomes. To test this theory, he developed a conceptual model (Figure 2.5) which emphasised student selection for, or socialisation to, certain behaviours and attitudes which were expected to have a direct effect on drop out. The most significant finding from the study was the effect which social life exerted on institutional 'fit' and the conclusion that students actively shaped their socialising environments.

FIGURE 2.5

SELECTION AND SOCIALISATION. (BEAN, 1985, 37).
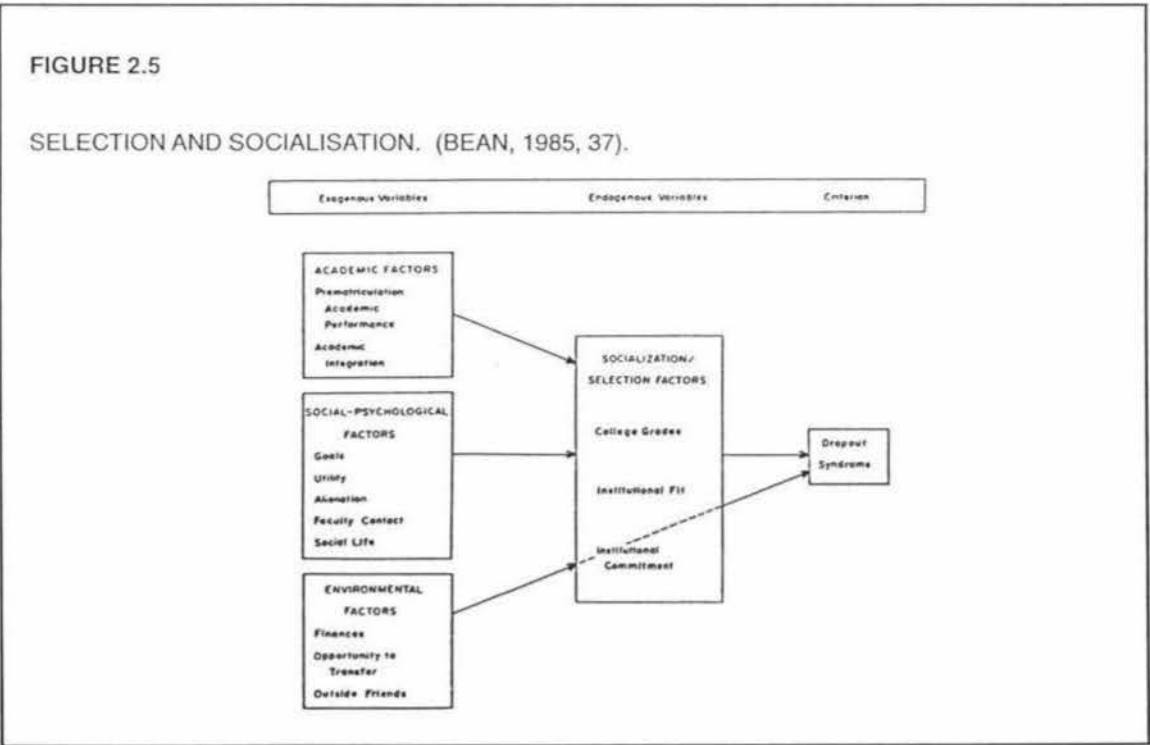
In this model, academic, social-psychological and environmental factors are shown, through the process of selection/socialisation, to influence the students' academic performance, their sense of institutional 'fit' and commitment, and consequentially, their persistence on the programme.

As a result of his (1985) study of traditional college students from Indiana University, Bean concluded, in common with Tinto (1975), that socialisation is a dominant force influencing drop out decisions, although selection, rather than socialisation, appeared to have the greatest influence on academic achievement. Indeed, both these models show remarkable similarities, possibly because of similarities in the student populations, which included a predominance of dormitory residents. A major difference in Bean's model was the inclusion of environmental variables. Lack of finances, perceived opportunity to transfer and the pull of significant others outside the institution were thought to negatively influence institutional 'fit' and commitment and, thus, to directly affect drop out. However, a bias towards high ability students, voluntary leavers and women in the population sample which formed the basis for this work may have contributed to the high level of environmental influence apparent in this study.

In a subsequent paper presented by Bean & Metzner (1985) in the same year, the effects of environmental variables on drop out were considered through a study of non-traditional (older, part-time and commuter) students. While older, part-time commuter students were found to comprise an increasingly larger proportion of the student population, these non-traditional students showed a higher rate of drop out than their traditional counterparts (Astin, 1975). Many of the previous models to account for drop out had been developed through studies of full-time, residential students (eg. Tinto, 1975; Bean, 1985) or distance learners (eg Sweet, 1986; Kember, 1990) and the reasons why 'non-traditional' students drop out of higher education programmes was not well understood.

Calling on the work of Murray (1938), Bean & Metzner deduced that 'non-traditional' students experienced a completely different 'environmental press' than their traditional (18-24 year old, full-time, residential) counterparts. They undergo less interaction with peers and staff and make little use of campus services because of the part-time nature of their studies and the pressures of home life and job responsibilities.

They concluded that the higher drop out rates commonly recorded for these students could be attributed to their age (older students were considered less susceptible to socialisation agents), their lack of exposure to the primary agents of socialisation (staff, peers, and living arrangements) and their greater openness to influences from the external environment. Theories of traditional student drop out contained elements other than socialisation which Bean & Metzner acknowledged were relevant however. They agreed that drop out was a longitudinal process, they expected background variables to affect how a student would interact with the institution, and academic variables to affect drop out decisions, and these relationships were maintained in Bean & Metzner's (1985) model (Figure 2.6), which attempts to capture the relationships between variables thought to influence 'non-traditional' student drop out.

This model is one of the few which acknowledges the substantial and direct effect which finances, amongst other environmental variables, have on drop out decisions, although the significance of this and other effects, has yet to be determined. Bean & Metzner identify a number of financial measures, including students' perceptions about their finances, although they note that previous researchers (Cope and Hannah, 1975) have reported that traditional measures of students' ability to finance their education, such as family income, were not highly correlated with students' listing of finances as a reason for withdrawal. However, financial difficulties may be a more important factor in drop out for mature students, they argue, citing Hughes (1983).

FIGURE 2.6

THE EFFECTS OF ENVIRONMENTAL VALUES. (BEAN AND METZNER, 1985, 491)

Key: —→ Direct effects
—→ Direct effects presumed most important
•-•• Compensatory interaction effects
••••→ Possible effects
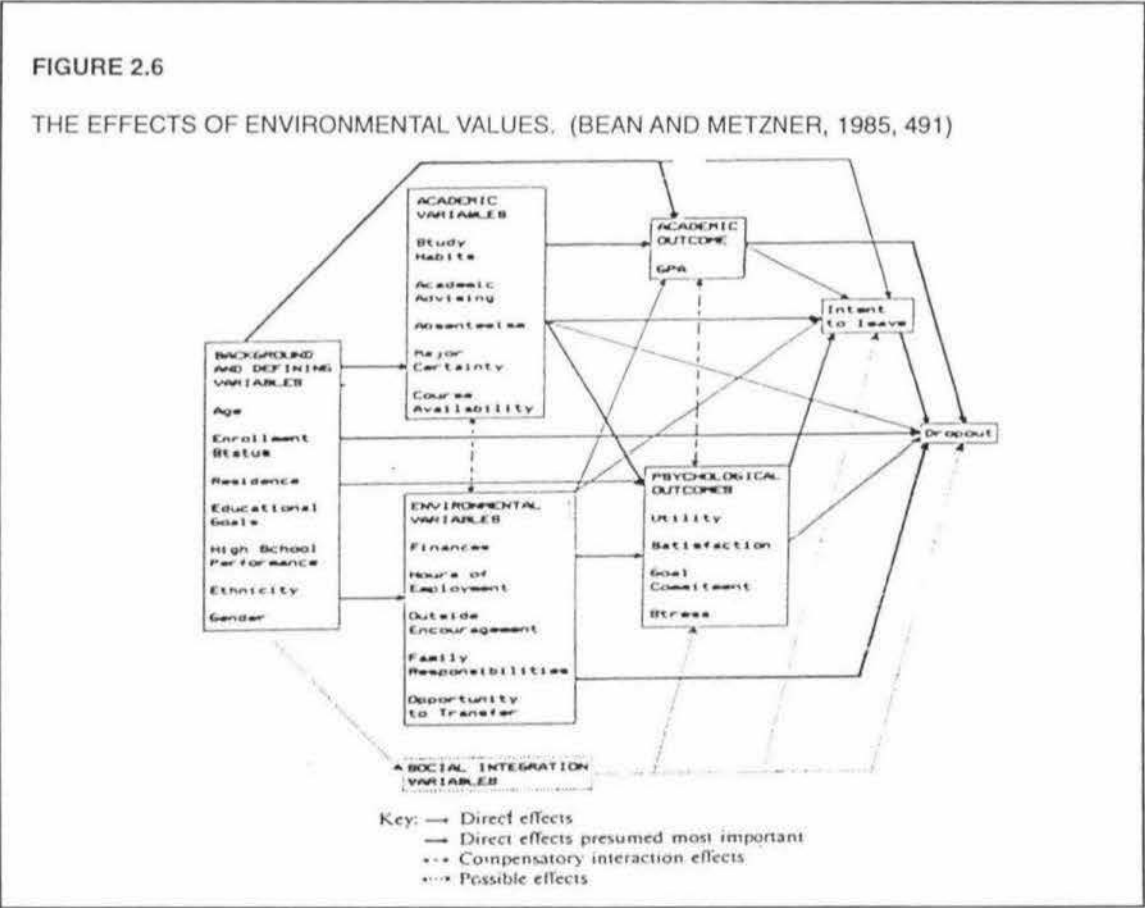
Models are employed by researchers to simplify and aid understanding. However, the web-like format of Bean & Metzner's drop out model merely serves to reinforce the notion that drop out is a very complex phenomenon, resulting from the interaction of a number of variables.

By suggesting that further variables can be added, where these are observed to be important in a particular institution, Bean & Metzner appear to acknowledge that, despite its complexity, the model may not have captured all the variables which contribute to drop out. They also suggest that the importance of various variables may differ according to sub groups such as older students, part time students, ethnic minorities and women.

The models described in the last section have a common origin in their conceptualisation of drop out as similar to work turnover. However, as these models were tested, findings accumulated, and theories reassessed and modified, a convergence of the 'investment' and 'integration' theories appears to have occurred.

Despite their different origins, both theories share a common assumption that drop out is the consequence of a 'cost/benefit' analysis, during which a student weighs up the rewards/benefits of studying and compares these with the costs/disadvantages of continuing. Whilst both models can be critiqued on the basis that little work has been done to explore the processes which may be associated with drop out decision making (although Bean, 1985, acknowledges the differentiation between drop out intention and behaviour), the resultant lack of commitment appears to lead to drop out itself. The lack of commitment arising from not being socialised to 'fit' in (Bean's 1985 model) appears to be similar to that arising from a lack of academic or social 'integration' in Tinto's (1975) model.

However, none of these models was able to account for more than 20% variance in drop out, leading researchers to ask whether some variables may have been omitted and to question the nature and significance of known interaction effects between variables.

2.7.3 A Multi-Variate Framework

Powell, Conway and Ross's (1990) model (Figure 2.7), presents the known interaction effects of drop out variables in a simple way, whilst attempting to acknowledge the different explanatory power and influence exhibited by the three main categories of factors identified through previous research studies: predisposing characteristics, institutional factors and life changes. In this study, 'success' was narrowly defined as the student passing the first year of the programme for which they were enroled and it included both voluntary and institution initiated 'drop out'. This model differentiates between faster changing life circumstances (such as changes in employment, finances, health, institutional support and family problems) and predisposing characteristics, fixed or subject to slow change (including the student's demographic characteristics, personality, motivation, stage of development and educational background).

Predisposing characteristics are seen as antecedent predictors, present before and during student involvement in education. In this model, life changes and institutional factors (the quality and difficulty of educational programmes, the level of support services and other factors under the control of the education provider) are not thought to act as direct causes of student

drop out, but to influence the probability of student success and persistence, through interaction with individual predisposing characteristics. In this way the model is able to take into account not only the complex multitude of variables influencing it, but also the heterogeneity of the student population as Getzlaf et al. (1984) had advocated.

FIGURE 2.7

A MULTI-VARIATE FRAMEWORK. (POWELL, CONWAY AND ROSS, 1990, 8).
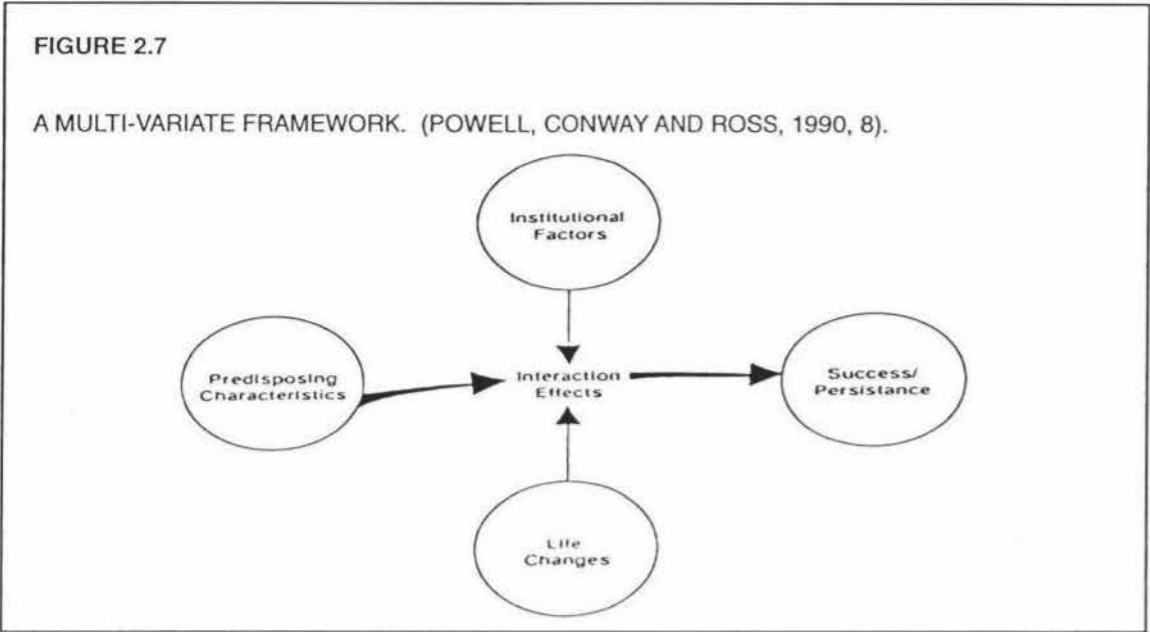
Applying this multi variate framework to drop out at Athabasca University, Powell et al's study found that nine predisposing characteristics were significantly related to successful completion of distance education courses. The variables found to be responsible for discriminating between students who successfully complete and those who failed or withdrew were persistence, marital status, need for success, need for support, students' literacy score, financial stability, study habits, gender and the students' rating of previous educational preparation. Variables which made no significant contribution included current educational level, educational commitment, level of support, attitudes towards studying, number of children and respondents' age. Powell et al. (1990, 16) concluded that "a substantial amount of the variance of completion behaviour is explained by predisposing characteristics". However, Powell et al., warn that the set of factors found to predict students' success and persistence amongst Athabasca University students would not necessarily apply to learners at other institutions. Changing institutional factors may alter the emphasis placed on certain predisposing characteristics they said, highlighting the need for comparative studies to ascertain whether any set of 'generic' predisposing characteristics exist. While the results of this study highlighted the influence of student predisposing characteristics, these factors did not account for all the variance of completion (less than 20% variance was explained) leaving open to further exploration the question of the nature of the interaction of predisposing characteristics with the variables identified in institutional factors and changes in life circumstance categories.

Powell et al's model is correlational, describing rather than accounting for the variables which previous researchers suggest are associated with drop out. Whilst the model clarifies the nature of the relationships between variables (the framework places predisposing characteristics first, in terms of both time and explanatory value), it is not useful as a predictive tool, a point acknowledged to a certain extent by Powell et al., who note "predisposition is not, in effect, predestination," (1990, 16).

The model was initially developed as a framework for studying the significantly lower rates of successful course completion observed in many distance teaching institutions. However, the inclusion of institutional factors appears to allow for the influence of the different variables which previous researchers (Section 2.4.2) suggest may be associated with institutions of varying characteristics. The 'life changes' category allows for the influence of the environment acknowledged by many previous researchers as very important in drop out for non-residential/ commuting and part time students, as well as those enroled in distance programmes. Thus it appears this model may provide a useful focus for research within any institution and "through focusing on the predisposing characteristics of students on entry, may allow for targeted support of those who have been identified 'at risk' of withdrawal", according to Powell et al., (1990, 17).

2.7.4   Summary

Despite the reservations noted concerning the power of existing models and doubts about the validity of various models in all situations, the convergence which resulted from the incremental modifications of models derived from these quite different conceptual bases gives confidence that their common elements can be used to assist this study of polytechnic drop out, both in guiding research direction and interpreting findings.

A summary of these key elements has been developed in order (Table 2.1) to highlight these similarities.

The 'interactive' multi-variate framework, and most of the 'integration' and the 'investment' models, contained three categories of variables identified as "very important" in student drop out and these were related to the students, the environment and the institution. All models placed the students' background and past experiences (their predisposing characteristics) first, where there was a linear relationship amongst variables, or highlighted their importance in terms of being present both before and during student enrolment in the programme and, thus, influencing the effects of other variables. As such, predisposing characteristics are described as antecedent predictors (Powell et al., 1990) and they may contribute to the varying responses (different forms of leaving behaviour/persistence) exhibited in apparently similar situations.

TABLE 2.1

A CONVERGENCE OF IDEAS: SIMILARITIES BETWEEN DROP OUT MODELS

MODEL	CONCEPTUAL BASIS	THE STUDENT	THE INSTITUTION	THE ENVIRONMENT	COST/BENEFIT
Kember's (1989) adaption of Tinto's (1975) model	Drop out results from a lack of integration into the institution	Characteristics: * individual * educational * family and home ° * work ° (° not in Tinto's model)	Integration into the academic/social system of the institution (Tinto)	In Tinto's model recognised implicitly through goal commitment; Kember adds social and work environment as explicit factors	Tinto claims students direct energies into activities which maximise the ratio of benefits to costs. Made explicit in the model by Kember
Schell & Thorton (1985)	Drop out is analogous to employee turnover and students 'invest' in education in order to meet certain goals (reap rewards)	demographic variables	satisfaction with the programme	perceptional situational variables	satisfaction high when programme offers high rewards and low costs.
Bean 1980	As above	background variables	organisational determinants: * grades achieved/ personal development * institutional quality * utility of education regarding employment	N/A	similar links (to above) with satisfaction, commitment and rewards
Bean 1985	As above	* academic factors: * social/psychological factors	institutional 'fit' - socialisation and selection factors	environmental factors: * finances * opportunity to transfer * outside friends	not explicit in this model though focus on commitment suggests similar underpinning to above
Bean & Metzner (1985)	As above	background and defining variables * age * enrolment status * residence * educational goals * high school performance * ethnicity * gender	academic variables: * course availability * study habits * absenteeism	environmental variables: * finances * employment * family responsibilities * encouragement opportunities to transfer	as above
Powell, Conway & Ross (1990)	Predisposing characteristics determine the nature of interactions with other factors and thus must be considered to have the greatest influence on whether a student drops out	predisposing characteristics - those characteristics students bring to the educational process at the time of entry: * past educational experiences * socio-economic/demographic status * motivation/perseverance	institutional factors under the control of the educational provider: * instructional methods * tutorial support * administrative and other student support services In the model these are shown to have greatest influence, to occur first	Life changes: * personal * illness * relocation * altered employment status * family problems Life changes occur quickly and often unexpectedly	How the interaction effects lead to drop out is not developed in this model

Further elaboration of this idea is provided by Tinto (1975). Central to Tinto's model is the notion that an individual's perception of reality has real effects on them, and, thus, individuals hold differing views of apparently similar situations. These perceptions are influenced not only by the characteristics of individuals but also by their environment. So, Tinto claims, a perception that there is a reduction in the number of available jobs may lead a student to withdraw from a programme of study, even though their experience at the institution has been satisfactory. Conversely, a student may persist in an unsatisfactory programme because of a high commitment to a career goal which can only be met through the gaining of a particular qualification.

Predisposing characteristics may be selected for by an institution (Bean 1985) and, thus, may affect the drop out rate of that institution, a point highlighted by the many previous drop out studies (Section 2.4.2).

Institutional factors, those under the control of the educational provider, were a common denominator in all the models described, although how these related to drop out was variously interpreted. Schell & Thornton (1985) suggest that the level of satisfaction (the students' perception) is of paramount importance in student retention, whereas Bean (1985) considers that institutional 'fit', the result of either socialisation or selection, is the key factor in determining persistence/drop out. Although these models were developed in response to drop out issues in specific types of institutions, most models appeared to allow for a range of institutional factors, so that the unique characteristics of any institution can be recognised where these impact on the decision to drop out.

The impact of the environment was not considered by many of the models because, compared to the influence of the institution, it was not thought to be as important in drop out, especially from residential institutions. However, for part time students and those full timers living in their own accommodation and commuting to the institution, external influences were recognised as having a major effect on a students' decision to persist/drop out. Such students were seen as less susceptible to the socialisation effects of the institution but more influenced by external factors outside institutional control. The environment included family responsibilities/problems, outside employment, opportunities to transfer and finances.

Whilst Tinto (1982, 689) maintains that finances are "but one component of a much larger matrix of factors that affect a person's determination of the total costs and benefits of continued attendance", Roberts et al. (1991) warn that students are beginning to feel the financial burdens of study, suggesting that this factor may have become more important in the decision to drop out than previous research has indicated.

Background and personal attributes influence students' expectations and commitments and the latter are considered both predictors and reflections of students' experiences of their interactions with the social and academic environment of the institution, according to Tinto (1975). Bean and Metzner (1985) note "compensatory interaction effects" between environmental effects (such as finances, family responsibilities and employment) and academic variables (eg. study habits, achievements), and between psychological outcomes such as satisfaction, stress and grades (academic outcomes). The numerous strands of the web of 'possible effects' within the same model suggests a great many interactions between variables, a feature of drop out made more explicit in Powell et al's (1990) model.

Whilst Powell et al's this model did not describe how the interaction of the various variables leads to drop out, most of the models (Bean, 1980 &1985; Schell & Thornton, 1985) suggest that students' commitment to continue was related to perceived rewards/benefits compared with the costs associated with continuing in the programme. Kember's (1989) adaptation of Tinto's (1975) model includes a 'recycling loop' which shows how changes in any of the variables lead to frequent cost/benefit analyses in which the student re-evaluates their commitment to the programme in light of these changes.

Financial, time and dispositional commitments are required to continue, Tinto (1975) asserts. These factors, along with reduced social life, loss of leisure and time with the family, lack of tutor contact, increased programme costs, loss of earnings while studying, declining educational rewards (ie. poor performance or lack of relevance of the programme) were variously cited as 'costs' associated with study. Benefits/rewards included the satisfaction of achievement (ie. good grades), the enjoyment of learning, the perceived relevance and utility of the course for future career aspirations, the possibility of pay increases or greater employment potential, positive feedback from tutors and the social benefits associated with being part of a student body. When the costs of study outweigh the benefits, these models suggest that the student will drop out. It was then not surprising to find that many of the reasons students gave for leaving (discussed in Section 2.6.4) seemed to be associated with the perceived costs identified by these models.

2.8 Conclusion

Although drop out is a problem familiar to higher education institutions overseas, comparatively little work appears to have been done in the New Zealand context. Information about drop out in the polytechnic sector in particular is limited, suggesting that an investigation into drop out from a New Zealand polytechnic may provide a useful contribution in the search for greater understanding of this phenomenon.

Two major conceptualisations of the drop out process have been put forward in the literature. The earliest of these, Tinto's (1975) 'integration' theory, was based on Durkheim's theories of suicide whereas more recent work (Bean, 1980 & 1985; Bean & Metzner, 1985; and Schell & Thornton, 1985) built on notions of commitment, satisfaction and reward revealed by studies of employee retention in industry, to develop 'investment' based theories of drop out. These theories share the common assumption that drop out is a consequence of a 'cost/benefit' analysis during which the student weighs up the rewards and costs of continuing in a programme. As noted in the last section, students' reasons for leaving are expected to give some insight into this aspect. The common elements of models developed to show the inter-relationship of variables known to be associated with drop out, suggest three foci for further study: the students, the institution and the environment.

The Students

The characteristics which students bring on enrolment were established as having the greatest influence on whether a student drops out in that they determine the nature of inter-reactions and, thus, the effect of other factors.

Failure to acknowledge the unique experiences and backgrounds of students from different gender, ethnic and socio-economic backgrounds has been raised as a critique of Tinto's (1975) model and the work of many earlier researchers in the field. Lack of clear operational definitions and failure to disaggregate data by student type is thought to have been responsible for many of the seemingly contradictory findings evident in previous drop out studies. Comparative studies provide a more accurate picture of drop out rates, although the lack of differentiation between stayers and leavers on a programme is a common finding which may be attributable to this failure to differentiate between students. Many researchers, notably Pantages and Creedon (1978), therefore, identify the need for finer discriminations between drop out categories in order to yield more meaningful results and develop better understandings of the drop out phenomenon. In addition, Powell et al. (1990) suggest that identifying 'at risk' groups may allow targeting of support services, as one strategy of reducing drop out.

Earlier research suggests that differential drop out rates between full and part time students (Section 2.4.3), those of different gender (Section 2.5.1) and amongst students of different ages (2.5.1) warrant further investigation. Difficulties in establishing socio-economic variables in relation to drop out from the polytechnic sector (Section 2.6.1) suggest this aspect should form the topic of a research project of its own, but it appears beyond the scope of this study. However, the unique cultural setting of New Zealand and lack of previous data on this topic suggest that inclusion of ethnicity as a factor in drop out would be worthwhile following up.

Previous research into the effects of academic factors on drop out suggested contradictory findings in relation to academic qualifications on entry, study hours and drop out. It was noted, however, that the entry level required for polytechnic programmes is generally not as high as those for University degree programmes and, as an increasing number of polytechnics now offer degrees, the situation regarding entry requirements is changing and in future this area may be more applicable to the polytechnic sector than it presently seems. The levels of academic performance, whilst actually on the programme was the only academic factor able to provide a consistent relationship with drop out and so it appears important that some way of eliciting feedback on a student's performance prior to withdrawal be included in the present study. From previous New Zealand polytechnic studies (Ostman et al., 1988; Polyview Teaching and Learning Task Force, 1984) it appears that this sort of information is readily elicited through students' self-reported reasons for leaving their programme of studies.

Psychological and situation variables in drop out highlighted 'commitment' as having a clear relationship with drop out (Section 2.6.3) and this finding was incorporated into many of the models developed to account for drop out (for example, Kember, 1989 and Tinto, 1975). Students who lacked commitment tended to leave the programme early, according to de Rome & Wieneke (1982), suggesting timing of withdrawal as another key factor to explore in the present study. These researchers also found that a proportion of both persisters and drop outs were not satisfied with their course, reinforcing the importance of a comparative approach in drop out research. Only a small proportion of respondents in any drop out study (Section 2.6.3) reported dissatisfaction as a reason for leaving their programme prior to completion. However, because administrators at WRCP were particularly concerned that lack of satisfaction with either programmes or services may result in poor publicity and loss of the polytechnic's competitive edge, evidence of dissatisfaction as a reason for leaving will be looked for in the present study. A student's decision to leave may be the result of a loss of motivation or a re-evaluation of why they are studying, of their career options (Section 2.6.3), and this may be revealed through reasons students give for leaving, or through tutor commentary on programme drop outs (as suggested in Section 2.6.4), although the more complex aspects of why people choose to study and how their motivation changes over time are beyond the scope of the present study.

The Institution

Many previous studies gave very little information about the institutional context, even though the influence of the institution was clearly established as an important component by most drop out theorists (Section 2.7). The match, or 'fit', between what a student expects and what the institution can offer has been identified by Pantages & Creedon (1978) as one of the best theoretical focuses for understanding drop out. This finding would seem to support the notion of institution-specific drop out studies from which global trends may be identified, but whose

specific function is to establish drop out patterns and account for differences within an academic institution.

Information about the kind of institution, its size, its structure and organisation, its programmes, its values, goals and objectives, is essential contextual information in any drop out study. In addition, policies and procedures (for example, those affecting selection, support and guidance) which impact on the nature of the student population must also be outlined (Section 2.3). Key areas which previous research has highlighted as worthy of further investigation include drop out from particular subjects and departments, and at different levels of study.

The Environment

Students' reasons for leaving polytechnic programmes (Ostman et al., 1988; Polyview Task Force: 1984) suggest that external reasons beyond the control of the respondent were among the most commonly cited for dropping out. Whilst many writers have questioned the validity and reliability of these findings, the influence of the environment on students living at home, and particularly for part timers, has been well documented (Section 2.6.4). These findings confirm the need to disaggregate drop out data.

Drop out research also appears to have been hampered by its reliance on ex post facto student survey as the predominant methodology to gain feedback on drop out. In order to gain a holistic picture of drop out from both the institutional and student perspective, it is evident that a range of both quantitative and qualitative data must be sought, including the perspectives of other key informants, such as tutors and support staff.

The notion of 'cost/benefit' analysis was generally accepted by both the 'investment' and 'integration' theorists, although few studies reported financial difficulties as the major reason for student drop out. In the past, this may have been the case, but Roberts et al. (1991) highlight the changed economic conditions in which students now find themselves studying and under which educational providers must now operate. The changed economic context for institutional operation and its possible impact on student drop out was also a major concern for WRCP administrators. The character of an institution was established by various studies as an important factor in drop out and, thus, social and economic factors which impact on the institution may also influence student drop out. These factors affect student drop out in both an indirect way (by causing changes to the way in which an institution operates) and a direct way through, for example, changes in the degree of support and financial assistance available, and in the fees charged. With these relationships in mind, the next section of the literature review focuses on the changed socio-economic context of polytechnic education in New Zealand.

[1] These and other associated terms are described on page ix

[2] This is possibly a consequence of changed policies for admission or changed fees and allowance structures.

[3] The researcher's summary of selected drop out studies conducted in New Zealand and overseas is provided in appendix 1.

[4] NZQA: This body, charged with maintaining standards for National Qualifications in New Zealand, is described in more detail in Chapter 3.

[5] EEdO relates to groups which have traditionally been under-represented in the polytechnic sector especially Maori, Pacific Islanders, women, people with disabilities, people from low income backgrounds, people who are physically distanced from educational facilities and people who haven't done well in the educational system.

[6] Chapter 3 describes the origin of polytechnics in New Zealand.

[7] Open Learning is described in WRCP's Quality Manual (WRCP, 1994, b) as an approach which encourages the student to choose as far as possible their own time and place of learning and allows them to select from a range of learning materials. It places the emphasis on the student rather than the tutor, and offers a wide variety of options for course structures, methodology, materials and assessment.

[8] Drop out rates in first level extramural business courses were appended but no comparable figures for other faculties.

[9] The Arts & Community Studies department at Christchurch offers a large range of courses including Art, Design and Community and General courses.

[10] Age as a factor in drop out is further discussed in Section 2.5.1

[11] Sociology - the study of the developmental nature and laws of society and of human relationships.

[12] Section 2.5.1 suggests an apparent correlation between achieving well at school and at tertiary level.

[13] Current NZ policies on student allowances are described in Section 3.3.1

[14] The science that studies the human mind and behaviour

[15] Timing of dropping out is discussed in Section 2.4.3

[16] Some drop outs had joined their programme for interest only (Ostman et al, 1988) and once they had achieved their goals, they left (Knight, 1991).

[17] Physical sciences deal with the study of the inanimate.

CHAPTER 3:

LITERATURE REVIEW:
POLYTECHNIC EDUCATION IN NEW ZEALAND

Whilst the previous chapter established the importance of a student's background and characteristics in determining how they will respond to changing life circumstances and to the pressures of tertiary study, the influence of the external environment and the institution in the drop out equation were also highlighted as key factors by many theorists, notably Powell et al. (1990). This chapter reviews selected literature to establish the socio-economic context of polytechnic education in New Zealand, identifying changes in government policies which may have affected drop out. Both the 'integration' and 'investment' theories suggest that drop out is the consequence of a students' 'cost/benefit' analysis. Thus, changes which resulted in raised course fees and reduced financial support for students directly impact on the 'costs' associated with tertiary study and may possibly have increased the drop out rate from polytechnics. Changes may also affect drop out indirectly, through economic and educational policies which shape the way polytechnics operate, influencing their activities, their culture and the nature of the interaction between the institution and its students. This chapter seeks to identify such changes.

3.1 Background

Education and the Role of the State

The perceived role of the state is critical in understanding changing educational policies.

Codd, Harker and Nash (1990) describe three perspectives on the role of the state, and its relationship to education. In the liberal view (Renwick, 1986), education is seen to promote social mobility and the purpose of the state is to provide an equitable means of distributing social goods amongst competing groups on the basis of their needs. The Marxist conception of the state is as an instrument of the capitalist class, necessary to maintain control over the relations of production, to avert the economic crises endemic to a capitalist society.

However, Offe (1984) maintains the state cannot be so simply conceived, arguing that the modern capitalist state contains the contradictory aspects of the liberal and Marxist perspectives: it both supports the process of capital accumulation and guarantees the collective interest of all members of society. The value of labour is enhanced through educational policies

in a mode of production which requires a high level of specialised knowledge both to manage and operate profitably, but the social costs of private accumulation are reduced through welfare policies, the power of the state being dependent on both popular and financial support (through taxation).

According to Snook (1992), the state has been involved in education in three ways:

1.   Provision (of schools, polytechnics and other facilities including teacher training)

2.   Subsidy ('free' education) and

3.   Regulations (of curriculum and standards)

There has been a trend over the last decade for a reduction of state provision and/or subsidy accompanied by an increase in regulation across educational institutions in line with Treasury driven 'New Right' ideologies.

Around the time of the study a number of far reaching changes in legislation increased both the autonomy and accountability of the tertiary sector[1]. Nash (1994) notes that critics view recent education 'reforms' as "little more than a desire to reduce central government educational expenditure...," (1994, 175). Since 1984, successive governments have aimed to optimise the use of limited resources as part of policies to restructure the economy, but Nash argues that the increased political control afforded is the more important outcome sought through these changes.

As government subsidised institutions, a previous study by Coutts (1992) revealed small polytechnics as particularly vulnerable to influence by government legislation and prevailing economic conditions. The following section traces the effect of the political, social and economic environments on the polytechnic sector[2] with particular reference to those institutions, such as Wanganui Regional Community Polytechnic (WRCP), which had their origins as community colleges.

Historical Context

Seven regional polytechnics were proposed as part of the third Labour government's regional development policy, purportedly along the lines of the 'community college concept'[3] originating in the United States. The first, Hawke's Bay, was established in 1973 with the others following in quick succession. Wanganui Regional Community College was one of the last to be opened in 1984. Many of the community colleges were built on the foundation of night classes and apprentice courses run at local high schools and technical colleges. They were able to respond to a widespread interest in continuing education, as well as providing vocational courses to meet industry demand for higher level skills in the construction, engineering and business sectors.

Curriculum development for vocational courses was a nationally controlled process. The Trades Certification Board (TCB) was set up in 1949 to oversee apprentice training and the Advanced Authority for Vocational Awards (AAVA) was established in 1954 for technician training. Industry representatives on these bodies determined the knowledge and skills to be taught, set hours of on/off job training and established and monitored standards through examinations in a tightly controlled learning environment. Although funding was controlled through regional Educational Department divisions, each polytechnic had the flexibility to design and run courses to meet local needs in a wide range of interest areas. Fargher (1985, 15) asserts that the expansion of the polytechnic sector in the sixties and seventies was a consequence of economic growth,[4] rather than a cause. Hence the subsequent economic recession brought about by increasing oil prices, Britain's entry into the Common Market and rising unemployment precipitated Treasury cuts in education spending. However, rising unemployment became of such political concern that special funding was put into polytechnics to run 'transition to work'[5] courses. By way of example, one half of the class contact hours at WRCP were in this area between 1986/87 (Coutts, 1992). Although the proportion of transition programmes may not have been as great in the larger, more established polytechnics, the introduction of these courses resulted in radical changes to the student population of most polytechnics.

According to Weir (1988, 126) these courses function not only to disguise the true extent of unemployment, but also to provide a 'holding pattern' of work attitudes and skills should the economic situation improve. Women, Maori, and young people have historically been used as a surplus pool of labour, according to Korndörffer (1988,198). Certainly these groups have been disproportionately represented among the unemployed in the current recession. A consequence of this has been their 'over representation' on transition programmes, thereby increasing the proportion of those groups within the polytechnic student community also. Previous writers (Section 2.8) suggest that these groups may be more at risk of dropping out than other students, although the failure of many studies to disaggregate data by student type has limited progress in developing an understanding of the drop out patterns in various groups.

Such courses were an inadequate means of resolving the unemployment problem with numbers rising from 4,000 in 1977 to 78,170, plus an additional 26,777 on state subsidised schemes in 1986, and, thus, the concept of a direct relationship between state investment in education and economic returns began to be questioned in the mid-sixties. Public concern regarding deficiencies in education, combined with calls for increased community participation, were increasingly heard, "signalling a legitimation crisis," according to Codd (1990, 192). He defines legitimation as "what persuades the mass of the population that the status quo is the common-sense way to organise society," (op. cit.). A crisis of legitimation can be recognised when the system fails to provide the generalised level of support for state actions and, therefore, the

system fails to provide the generalised level of support for state actions and, therefore, the government lacks the ability to implement its policies (Habermaas, 1976).

The share market crash of 1987 provided the impetus for a radical change in education policy. The 'New Right'[6] education policy was heralded by the 1987 Treasury briefing to the incoming Labour Government (Treasury, 1987) and supported by public pronouncements of leading 'New Right' groups, such as the New Zealand Business Round Table (1988). 'New Right' saw education in economic terms, as a means of providing trained human resources to meet the needs of industry.

Treasury maintained that education had failed in terms of fostering equity, with neither participation, achievement, nor improved economic output resulting from past policies, and hence argued that state intervention in education should move away from ensuring provision to ensuring choice.

The Hawke Report (1988) on 'Post Compulsory Education and Training' (PCET) reflected Treasury's influence. Hawke was highly critical of existing structures, endorsing the view of an unresponsive, inflexible, inefficient, bureaucratic education system. His recommendations to improve tertiary education effectiveness focused on streamlining funding, recommending the dismantling of regional Education Department structures, the devolvement of management responsibilities to polytechnics and community involvement through governing Councils. These suggestions resulted in the 'Learning for Life' policies (New Zealand Government, 1989, a), which imposed new organisational structures and funding arrangements in an attempt to change the direction of tertiary education in New Zealand.

These reforms began with the State Sector Act 1988, which placed all state unions under the Labour Relations Act 1987, and established polytechnics as separate employers. The Education Act 1989, and the Education Amendment Act 1990, defined the parameters of polytechnic activities, establishing them as bulk funded bodies corporate. Bulk funding of the tertiary sector is based on the number of equivalent full time students (EFTS) in course cost categories (Ministry of Education, 1991, b; Ministry of Education 1991, e).

Besides radically altering tertiary sector management, the Education Act and its amendment opened up competition by allowing any accredited providers (for example secondary schools and private trainers) to offer courses. This legislation also allowed institutions other than universities to offer degree programmes, presumably on the basis that increased competition will improve performance.

The academic freedom and autonomy granted by this legislation were accompanied by requirements for ethical standards of operation, efficient resource usage, accountability, and the need for public scrutiny, with polytechnics in effect entering into a "contract for the delivery of services" according to Perris (1991, 9). This contract requires the publication of Ministry-determined efficiency and effectiveness indicators which measure performance and evidence accountability for the use of public funds, based on an 'inputs', 'outputs' and 'outcomes' business model of education. Monitoring is achieved by externally driven audit against objectives set in the Charter and Corporate Plan. The New Zealand Qualifications Authority was set up at the same time to maintain standards in educational institutions including polytechnics.

Snook (1991, 622) maintains that the overall result of decentralising reforms has been to create an even more centralised and bureaucratic system. Bulk funding and the contract for delivery of service have been used as mechanisms by government to reduce state expenditure and to control the level and direction of polytechnic activities.

These external factors, thus, had major effects on the operation, administration and organisation of polytechnics, and several smaller polytechnics experienced financial liquidity problems with the introduction of the new bulk funding system: increases in student fees were an immediate result. According to Hoy and Miskel (1987, 99) complex and uncertain environments (such as that in which polytechnics have operated since Education Department buffering was removed) tend to favour decentralised organisational structures with many divisions and, thus, these changes were frequently accompanied by internal restructuring of polytechnics' management and organisation. In many polytechnics uneven growth in programme areas occurred as a result of the impact of a number of recent Government policy changes (notably Study Right and the Industry Skills Training strategy). In combination with the continued downturn in construction, engineering and land based industries, these changes have resulted in further restructuring, redundancies[7], and in some instances the overall viability of whole institution[8] has been questioned. The impact of these changes on a particular polytechnic will be an essential part of developing an understanding of drop out from that institution.

Drop out research suggests (Section 2.4.3) there may be differences associated with courses and subjects, depending on whether they are perceived as being vocationally oriented or not. The next section describes the current context for vocational and community education programmes in polytechnics, with particular reference to the impact of the institution and its programmes on participation and subsequently (Boshier, 1973) on drop out.

3.2 The Current Situation

3.2.1 Vocational Education

Historically, the direction of educational policy has been influenced by prevailing economic, social and political conditions, with educational institutions seen as contributing to the perceived problems and hence integral components of the proposed solutions. For example, Lockwood Smith asserts that New Zealand needs to develop a "highly skilled and adaptable workforce" (Ministry of Education, 1992, c) through an improved industry training system, and this thinking underpinned the announcement of the Industry Skills Training Strategy in the 1991 budget and the Industry Training Act 1992, which established Industry Training Organisations (ITOs) as the mechanisms for more flexible and responsive industry-driven training. The imposition of an industry driven, centrally prescribed curriculum tied to contestable funding marks the beginning of a major shift both in curriculum development practices and funding allocation for the polytechnic sector. In addition this move masks a further reduction in state subsidisation of training.

The Training Opportunities Programme (TOP) scheme is also part of the 'Skill New Zealand' strategy. It provides fully subsidised training for school leavers with no qualifications and for long term unemployed people. A major difference between TOP and previous training schemes for the unemployed was the linking of TOP units of learning to NZQA's National Qualifications Framework, an aspect designed to assist trainees to gain credits towards recognised qualifications and, thus, promised improved employment prospects. Because this scheme targets 'disadvantaged'[9] people for a 'second chance' training opportunity, participants are very likely to be 'first time' tertiary students identified at high risk of dropping out by previous researchers (Garrison, 1985; Smith, 1987).

Recent government education policies have focused on the alleged necessity to upskill the New Zealand workforce and one measure of achievement in meeting this goal is provided by the increased numbers of students participating in 'Formal'[10] education, that is education leading to a recognised qualification. In the polytechnics most of the qualifications in the 'Formal' education category are vocationally oriented and such courses appeared to have higher drop out rates than 'community' or 'non-formal' courses according to Hooper, 1988.

Since the 'Learning for Life' policies were introduced in 1989 the total number of students enroled in 'Formal' tertiary education overall has increased by 37%[11], as shown in Figure 3.1. In the polytechnic sector, however, the numbers of students declined in both 1988 and 1989, but the most dramatic drop was experienced in 1990.

FIGURE 3.1

TERTIARY EDUCATION ENROLMENT TRENDS

Year	College of Education Sector	Polytechnic Sector	University Sector	Total
1987	2,022	79,711	65,762	147,495
1988	4,413	77,602	72,313	154,328
1989	4,772	74,302	79,223	158,297
1990	5,677	56,227	78,559	140,463
1991	8,073	69,083	87,973	165,129
1992	10,315	98,646	93,182	202,143

Note: Numbers of Students Enrolled at 31 July

Source: Ministry of Education 1993, 64.

The Ministry notes that the introduction of computerised enrolment systems into the polytechnic sector in 1990 resulted in some "disruption in data collection, so data for this year is not comparable with previous or subsequent years" (Ministry of Education 1993, b, 64), although some of this fall in numbers may have been attributable to the effects of changed government policies. Indeed, a comparison of the numbers of participants (Figure 3.1) with the growth in Equivalent Full Time Students (EFTS) in the polytechnic (Figure 3.2) suggests that the apparent decline in numbers may be a function of the changed pattern of enrolments, with fewer part time, and more full time enrolments over this period. As many drop out studies (Section 2.4.3) noted higher drop out rates amongst part timers, the possibility and implications of such a change on drop out warrant further investigation.

FIGURE 3.2

EQUIVALENT FULL TIME STUDENTS (EFTS) AT TERTIARY INSTITUTIONS FROM 1982-1992.
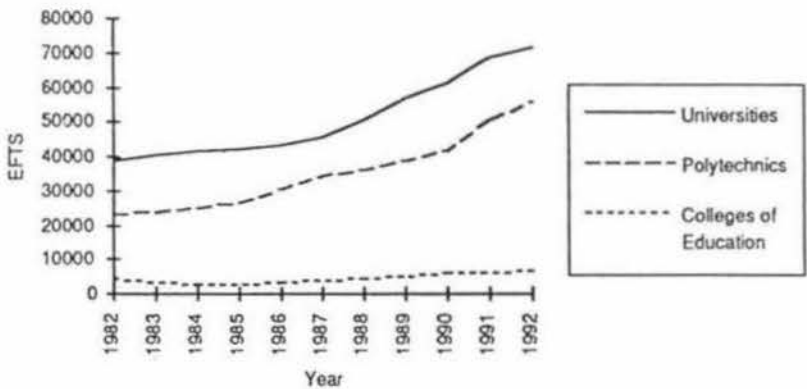
Source: Ministry of Education, 1993, page 65.

Despite the different categorisations applied from year to year, overall indications suggest increased participation rates in programmes leading to 'Formal' qualifications in the polytechnic sector (Table 3.1). The 'Skill New Zealand' strategy assumes that those successfully completing such courses will have increased chances of finding employment. However, no national statistics were available on retention/completion rates or on the destination of 'Formal' students, and hence the effectiveness of this particular policy could not be commented on, although the last chapter (Section 2.6.3) established links between reasons for studying and persistence. It appears that establishing 'vocational' and 'part-time' participation rates is important to provide a context for withdrawing students who, previous research tells us (Hooper, 1988; Hibbett, 1986) are more likely to be part-timers, disappointed to find their vocational programmes less interesting and more demanding than they had expected. Indeed, now that government 'reforms' have resulted (presumably) in more industry driven programmes, programmes designed to meet the specific needs of employers, the question as to whether they are able also to meet the possibly different needs of the course participants is raised. The 'fit' between the institution, what it is able to offer, and students' needs and expectations, has already been highlighted as very important in determining persistence in, or drop out from, a programme (Pantages & Creedon, 1978).

TABLE 3.1

'FORMAL' EDUCATION PROGRAMMES: NUMBER OF ENROLMENTS

YEAR	TOTAL FOR ALL NZ POLYTECHNICS	DATA COLLECTED BY MINISTRY OF EDUCATION CENSUS AT 30 JULY REFERENCES
1989	49,604 ⁑	Education Statistics of New Zealand (1990, 74)
1990	56,771 ○	Education Statistics of New Zealand (1993, 64)
1991	89,069 =	
1992	98,646 =	
1993	n/a at time of study	Data Management Unit, Ministry of Education (Jan 6, 1994)

Note: Definitions of categories have not remained consistent between years:
⁑ Block courses and full-time/full year participants
= Attending formal programmes, both FT and PT attendance
○ The Ministry note that in 1990 a computerised enrolment system was introduced into polytechnics resulting in some disruption to data collection, so data for this year is not comparable with previous or subsequent years (Education Statistics of NZ, 1993, 64)

3.2.2   Community Education

An aging population and increasing numbers of unemployed have resulted in growing numbers of potential community education participants. People in the informal sector (people not in paid employment) seek education as personal development and skills for living but may also require work skills.

Growth in community education participation has continued in the polytechnic sector (Table 3.2) since 1990, despite changes in the funding structure which reduced the number of Community programmes able to be run by polytechnics (Verböeket, 1990). These changes also resulted in higher fees, raising the cost for students and possibly increasing the likelihood of withdrawal, (Kember, 1989; Schell & Thornton, 1985).

TABLE 3.2

NUMBER OF ENROLMENTS IN COMMUNITY EDUCATION

YEAR	TOTAL NUMBER OF ALL NZ POLYTECHNICS	TOTAL ENROLMENT FOR YEAR AS AT 31 JULY REFERENCES
1989	162,478 □	Education Statistics of NZ (1990, 74)
1990	23,627 ○	Education Statistics of NZ (1991, 119)
1991	30,863	Education Statistics of NZ (1992, 114)
1992	39,672	Education Statistics of NZ (1993, 88)
1993	not available at time of completing study	Data Management Unit, Ministry of Education (Jan 6, 1994)

□   "Part-time", "Short Courses", and "Seminars" were the 1989 categories used to derive this data

○   The Ministry note that in 1990 a computerised enrolment system was introduced into polytechnics resulting in some disruption to data collection, so data for this year is not comparable with previous or subsequent years (Education Statistics of NZ, 1993, 64)

The apparent drop off in community education participation evident (Table 3.2) between 1989 and 1990 has been attributed to changes in the data sampling techniques and in the classification of courses, (Ministry of Education, 1993, b). However, ministry changes to operational definitions may have masked the effects of changes in government policies which have, previous writers argue, impacted on both the provision and accessibility of community education. These same changes may also have affected drop out from community courses.

The Ministry has defined 'Formal' programmes as those leading to a recognised qualification and the 'Community and General' (non-formal) category, therefore, includes everything else: TOPS and LINK[12] programmes, as well as programmes designed to meet basic educational needs (for example Adult Reading and Learning Assistance (ARLA), and English as a Second Language (ESOL) programmes), those designed to develop the individual's inner potential and to strengthen their positive awareness of themselves, as well as hobby programmes and those which cater for the interests of the public.

Prior to the 1970's, community education followed 'traditional patterns' according to Verböeket (1990), with participants learning new skills on marae or in community halls. However, it was not until 1972 that the New Zealand National Commission report to UNESCO established the concept of learning as a lifelong process for everyone. Verböeket maintains that from that point on community education flourished in New Zealand, with the introduction of the 'community college' concept, the designation of schools as community learning centres and the implementation of Rural Education Activities Programmes (REAP) in 13 rural areas.

However, the economic crises which dominated the late 1970's and early 1980's, saw a rise in unemployment and massive social change which ultimately resulted in the establishment of Community Learning Aotearoa/New Zealand (CLANZ), a committee set up by the Ministry of Education in 1986 to advise the Minister on policy direction and all aspects of non-formal learning including the allocation of government funds on a contestable basis.

The Hawke Report (1988, 96) saw non-formal education as a grey area, a continuum between individual activities and the 'mainstream' activities provided by post compulsory education and training (PCET) organisations: funding of community education was a principle issue for government according to Hawke. Whilst *Learning for Life II* indicated that there was government support for community education in polytechnics (New Zealand Government, 1989, a), the EFTS bulk funding formula applied in 1990[13] apparently made the provision of part-time programmes less attractive for institutions to run - they took more time to administer and utilise room space less effectively, according to a survey conducted by CLANZ later in that same year. This survey found a reduction in the number of community courses offered (Verböeket, 1990, 21) as well as institutional concerns about the future of community education in rural areas.

Many of the former Community Colleges claimed they were disadvantaged in comparison to urban polytechnics, and so by 1991 this funding mechanism was replaced by a standard fee structure applied to both vocational and community education programmes. At a charge of $2.50 per hour[14] polytechnics felt this would effectively cost community education out of the pockets of many participants. Only a few courses (such as prison education, ARLA, ESOL,

special needs, and courses for Maori/Pacific Island) were given dispensation to run at a reduced fee for equity reasons. Tobias (1991, 25) maintained that the 1991 budget constituted a direct attack on adult and community education, with almost every aspect of funding for the sector 'slashed' and adult entry to tertiary education "made very much more difficult". Unfortunately, enrolment figures for non-formal participation for individual polytechnics in 1991 were unavailable from the Data Management Unit of the Ministry and hence the impact of these changes on any specific institution can only be surmised.

In 1992 the funding system was again changed with costings for short courses based on a proportion of non-study right charges (described in the following section) but with a ceiling on the 'notional' equity EFTS which each polytechnic was allowed to run[15]. The effects on course costings of this funding mechanism resulted in reduced community education provision by polytechnics but also in a shift away from the focus on personal development and skills for living[16] previously associated with the concept of community education. Community education came increasingly to mean participation in modules offered as components of existing programmes towards vocational qualifications. This trend has been encouraged by provisions in student loan schemes to support part-time students wishing to complete a 'Formal' programme of study.

This shift in focus may lead to a mismatch between tutor and student expectations of course outcomes, and the latter may be a factor in the high incidence of part-time student withdrawals recorded by previous researchers, (notably Smith, 1987; Thomas, 1985). What the notion of 'part time' and 'community courses' mean in the context in any particular institution is obviously variable. However, the nature of enrolment and the type of course have been identified as potential factors in drop out and hence these definitions need to be clarified before any comparisons with previous research findings can be attempted.

3.3 Financial Support for Students

There has been extensive research into drop out but few studies prior to 1990 mention finances as a factor in the decision to withdraw. However, Roberts et al (1991) maintain that students are beginning to feel the financial burdens of study and that this is becoming a major determining factor in the 'cost/benefit' analysis which a student is known to undertake prior to withdrawal. This section outlines recent changes in student financial support and course fees which may impact on drop out.

3.3.1 Recent Changes to Fees, Allowances, and Student Financial Support Policies

Students studying in 1990 were entitled to a range of financial support, as evidenced by Appendix 2. Of the 56,076 students participating in polytechnics at 31 July 1990, approximately one in five, or 9,424 received student allowances of some type. At this time tertiary education was subsidised and the fees set by polytechnics were to offset costs where these could not be entirely met through government funding. Fees[17] ranged from $130.00 to $520.00 for a full time full year course.

However, the Treasury briefing to the returning Labour Government, (following the 1987 general election), alleged that the education system had been subject to middle class capture, with finance transferred from the poor to the rich through taxation and subsidised provision (Treasury, 1987). Treasury, therefore, recommended a 'user pays' system be introduced for tertiary education, a pronouncement which heralded a raft of changes affecting fees and allowances, the first of which was the 'tertiary tuition fee' introduced in 1991. The tertiary tuition fee was standard across all polytechnics and, for a full-time full-year programme, was set at $1,300. However, reductions were established for 16 and 17 year olds, 18 and 19 years olds from low income families, those on basic vocational educational programmes (foundation and introductory courses), and disadvantaged groups for whom it was considered the new fee structure would pose a barrier to educational opportunity (eg. those with dependants, long term social welfare beneficiaries).

The introduction of bulk funding on an EFTS basis in 1990 was, in effect, a reduction in finance for small polytechnics and hence many levied an additional fee to cover basic class materials and administration costs which, together with the compulsory Students' Association fees, resulted in total tuition fees in the order of $1,720.00. People on shorter programmes paid a percentage of these fees, based on the proportion of EFTS generated.

Each polytechnic was provided with a small hardship fund (as an example, $25,000 was allocated to the Wanganui Polytechnic in 1991) to help students for whom the payment of tuition fees would cause serious hardship. The criteria for applications were established by the Ministry of Education. One election platform of the National Party was the abolition of the tuition fee, which was duly removed when it became the government in 1991. In its place the 'study right' concept (Ministry of Education, 1991, e) was introduced in 1992 .

Study Right is a three year entitlement of 95% tuition subsidy which aims to provide school leavers with access to tertiary education and training "according to their needs," (Ministry of Education, 1991, e, 9). Students in the fourth year of a programme and 'mature' (aged 25 and

above) must pay the non Study Right fee (ranging from $1,622 to $2,112) which was subsidised at 85% of the total cost in 1992. The subsidy for Non-Study Right students was planned to drop progressively to 80% in 1993 and 75% in 1994 and thereafter. Study Right was justified on the basis that low earnings as students would be more than compensated for by higher incomes in later years. The Business Round Table (1988) argued that it is the students who capture most of the benefits and, therefore, they should pay. This view was certainly that of the government, as indicated in Richardson's (1992) "Economic Strategy", which maintained that because University graduates have a considerably higher income than those without qualifications, this income difference could be drawn on to pay for their education over time. The Study Right concept has been applied across the whole tertiary sector on the assumption that polytechnic graduates will also earn higher incomes as a result of their training. This assumption can obviously be challenged.

At the same time as Study Right, a number of other changes[18] were introduced which reduced the level of financial support for students:

- The maximum rates of student allowances were reduced to reflect the changes to the social welfare benefits which came into effect on 1 April 1991.
- The rates of student allowances for single students aged 16 to 24 were reduced dependent on combined parental income levels: the rate of allowance was abated at 25c in the dollar for parental income above $27,872pa, plus $2,200 for each additional full-time student aged 16 to 24 years in the family.
- The basic allowance for students 16-20 was abolished.
- The statutory declaration 'application for only one parent's income to be tested' (E6/450) was introduced 1 January 1992 in conjunction with the above.
- The 'second chance provision' was also lost at this time.
- The transport allowance and student accommodation supplement was abolished.

These changes in financial support for students have achieved the effect which government was looking for, in that a greater proportion of younger people than older are now found in the tertiary student population, according to the Ministry of Education: "At the core tertiary age (18-24 years) over 27.11% of that age group is enroled on a 'Formal' tertiary education programme, and a number of others participate in industry skills training," (Ministry of Education, 1993, b, 64).

At the same time as the 'Study Right' scheme was being implemented changes to the funding of tertiary institutions resulted in increasing tuition fees for students. The impact of bulk funding for tertiary institutions had different effects, depending on the size and stage of development of the institution and its 'mix' of students (Study Right and Non-Study Right generated different levels of subsidisation as noted previously). Small and more recently established polytechnics

experienced financial difficulties as a result. For example WRCP, the fourth smallest and one of the most recent polytechnics, experienced an 18% reduction in funding per equivalent full-time student between 1991 and 1993 (WRCP, 1993, a).

In mid 1993 government announced further tertiary funding cuts with a 1.4% reduction across all cost categories, 0.8% of which was to be used to fund a proposed $250,000 base grant for institutions. This was the third consecutive year in which reductions in funding rates for equivalent full time students had been announced. The per student grant was reduced by 2.5% in 1993 and is estimated to reduce by 4% in 1994, taking into account the introduction of the infrastructure grant[19], which is less than half the level needed to compensate for the reductions in funding. Polytechnics tried to absorb as much of the reduction in funding as possible but most found they had to increase student fees subsequently to make up the difference between government subsidy and the operation costs of running programmes. Most fees rose by about 2% bringing the average cost of joining a programme to about $1,100 for study right and $2,000 for non-study right students.

Although government argues that the provision of a Student Loans scheme introduced in January of 1992 more than compensates for changes in students' fees and allowances, they neglect to take into account cultural factors mitigating against working class students: for example the student allowances officer at WRCP noted that many students from low socio-economic groups talked of the importance of 'making it on your own' and could not see the longer term pay offs in taking on a financial burden[20].

Treasury's (1987) criticisms about the 'old system' allowing middle class capture may have contained some elements of truth; unfortunately the removal of the hardship grant, the introduction of means-testing for allowances, and the cultural barriers against loans have increased the problem of access for working class students as well as mature women, Maori, and Pacific Islanders[21].

According to Lauder (1990), these students have historically considered polytechnics as providing a more user friendly and accessible form of tertiary education than universities. As many polytechnic courses provide cross credits to universities, enabling a start to tertiary study in a 'safe' environment where confidence can be gained, polytechnic education has, in the liberal view, been able to facilitate social mobility (Renwick, 1986). However, changes in funding policies from a student weighted hour allocation to bulk funding on an equivalent full time student (EFTS) basis have unfairly disadvantaged the polytechnic sector. These changes have resulted in increased fees, a reduction in the amount of face-to-face delivery and pressure to decrease student support services. These changes are thought to have increased barriers to participation and may also affect persistence on a programme, especially for those students

identified by the Ministry of Education as 'at risk'[22] - Maori, Pacific Islanders, women and those from lower socio-economic groups.

3.4 Conclusion

In summary then, a number of factors influencing polytechnics and their participants over, or immediately prior to the period of study, have been noted, including:

- Reduced bulk funding (percentage cuts had a greater impact on smaller polytechnics)
- EFTS allocation of funding (economies of scale meant that this funding formula disadvantaged smaller polytechnics)
- Fees and allowance barriers to student participation (affecting working class students, women and ethnic minorities to a greater extent than white, middle class men)
- Transfer of funding to ITOs (who may not use current providers for their training needs, undermining the trade training foundation from which polytechnics developed and many rely on: there is a minimum population below which a polytechnic's viability is questioned)
- Removal of community funding (user pays reduces access for the less well off participants and the costing system favours full-time enrolments)
- Encouragement of vocational training in schools (through National Certificate subjects and differential funding arrangements)
- Increased school leaving age (reduces students choice)
- provision of work subsidised schemes (reduces incentives for the unemployed to retrain)
- Encouragement of private providers (competition with polytechnics)
- Degree possibilities for polytechnics (differential funding for research across the tertiary sector, strains the polytechnic resources)
- Increased competition for students (and hence competition for funding) from private providers, schools, and universities
- Centrally prescribed curriculum tied to contestable funding (eg TOPS, ETSA[23] and ITO derived units of learning) reduces responsiveness to regional and individual needs.

The changes described in this section can be seen to have far reaching effects on the institution - on the way a polytechnic operates (more like a business) and on the programmes it is able to provide. These aspects are controlled by targeted funding allocations (approval to provide a number of EFTS in particular cost categories only), and attendant monitoring, linked to centrally-driven curriculum implementation through ITOs and NZPPC's[24] accreditation requirements. However, another effective 'control' is related to student participation and retention. Loss of students means loss of revenue, as government funding is provided on an equivalent full-time student (EFTS) basis. When students fail or do not complete a course there is a waste of

scarce human, physical, administrative and teaching resources. Thus, student satisfaction, and commitment to both the programme and the particular polytechnic, reflected by their persistence, have directly measurable financial consequences for a polytechnic. Whilst previous studies suggest that some level of drop out is inevitable, as many students apparently withdraw for personally positive reasons such as a new job, or the opportunity for further training in the course of their choice, drop outs may also indicate dissatisfaction with either programmes or service. Student drop outs may result in loss of community confidence in polytechnics as quality education providers, giving rise to longer term marketing problems and possibly the loss of students to other tertiary education providers.

Recent changes in legislation, which have increased both the autonomy and accountability of the tertiary education sector in New Zealand, have created an awareness amongst polytechnics of the cost of student drop out both to their coffers and to their reputation as quality education providers.

Figure 3.3 distributed by New Zealand University Students Association (NZUSA,1992, 5) shows the numbers enrolling across the whole polytechnic sector declined in real terms in 1990, corresponding to the introduction of education 'reforms'. It would seem then, that the reforms have had an effect on participation, and it is suggested that some students may have been more affected by these changes than others. Many previous studies suggest that drop out is an extension of non-participation (Boshier, 1973), and is, thus, influenced by similar factors. If this assumption holds[25], then the reforms may have created conditions which also resulted in increased drop out.

FIGURE 3.3

TERTIARY ENROLMENT TRENDS (NUMBERS)

Polytechnic Students

University Students

College of Education Students

Source: NZUSA, 1992, 5.
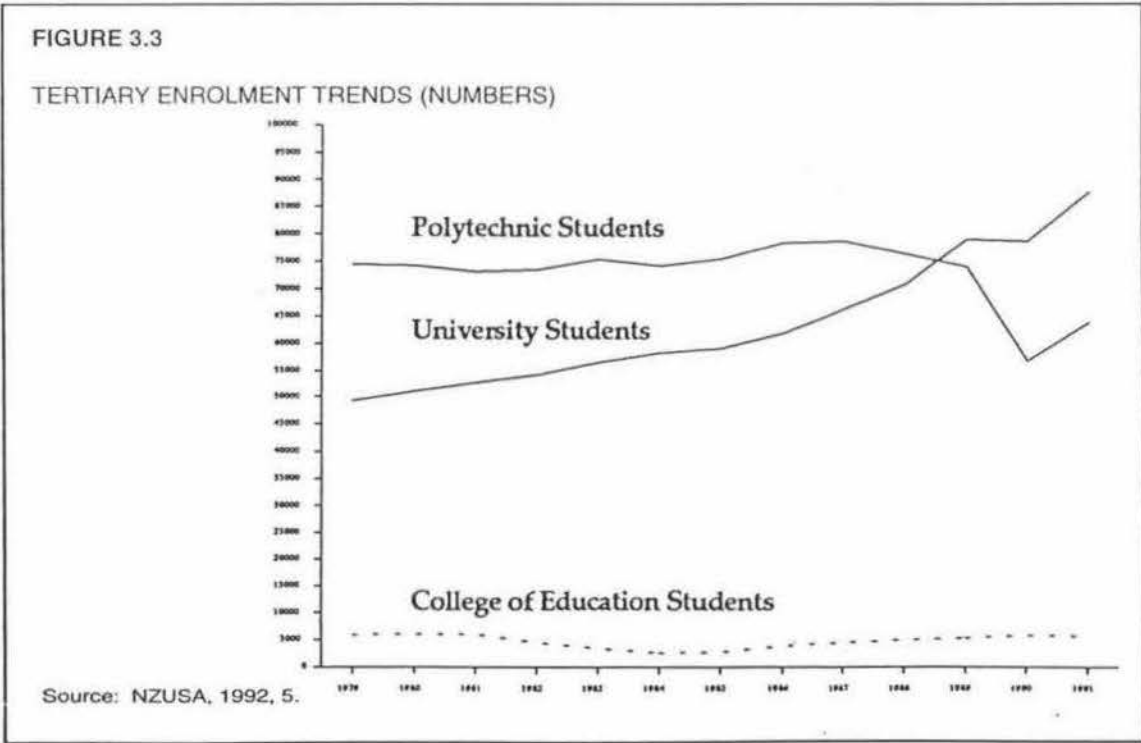
Although Cope & Hannah and many other previous researchers concluded that lack of finances was not a major factor in drop out, being "more of a barrier to starting college than it is to finishing ...," (1975, 18), the 1993 academic year featured both national and local media stories of financial hardship. This resulted in students "unable to complete their courses this year because they could not afford another loan," (Kirby Weis, WRCP Students' Association President, Wanganui Chronicle, May 1993) and considering not returning for a subsequent year of their programme because of the level of debt. A University students association[26] survey conducted at the end of that year (Dominion, 3rd January, 1994) found that some University students had "borrowed up to $80,000 and may be forced to drop out because of rocketing debts." In the past, financial problems had not been identified as a significant 'cause' of withdrawal when other factors were controlled for (Thomas, 1985, 43). However, finances are frequently mentioned in drop out studies and because economic conditions are in a continual state of flux this is one variable which should be continually monitored, Thomas (op. cit.) says. Financial aid, fees and loans pose political questions in relation to participation in polytechnics and seem to have introduced another very complicated set of variables into the already acknowledged complexity of the drop out situation. The proportion of students (particularly older students) with financial concerns is increasing, Solmon & Gordon's (1981) study (cited by Bean & Metzner, 1985) found, and since that time the financial situation for students appears to have become even more problematic, particularly for polytechnic students in New Zealand. Study is no longer an insignificant expense and, therefore, there appears to be a need for further research into lack of finances as a cause of student withdrawal in polytechnics.

It is against this backdrop of change resulting from external influences such as the economic downturn, increased competition and reduced funding as a result of government intervention, that this study occurred. Simultaneously growth in the size of the student population and in the diversity of programmes has resulted in internal pressures within individual polytechnics. These internal and external influences impact through the administrative structure on the delivery of programmes and hence on individual students, possibly influencing drop out in ways as yet unknown.

The review of international research summarised in the preceeding chapter indicated that a significant level of student drop out had come to be accepted by the higher education sector - it was regarded as a necessity in maintaining a reputation for academic rigour. However, it appears that this attitude is changing, in response to economic pressures which have forced educational institutions to optimise the use of limited resources.

The recent changes to the funding of New Zealand polytechnics described in the present chapter have made administrators aware of the costs of leaving students both to the institutions and the individuals concerned.

The two sections of the literature review provide a context for the investigation of drop out from Wanganui Regional Community Polytechnic, identifying issues for further research and suggesting an appropriate methodological approach.

The benefits of developing institution specific data which could respond to polytechnic administrators' concerns about the extent and nature of drop out were obvious. Reducing drop out clearly has measurable financial advantages for the institution, as well as less tangible benefits for its reputation as a quality education provider. The research methods adopted thus needed to lead to an identification of programmes with high drop out rates and to a differentiation of particular groups of students 'at risk' of dropping out so that the polytechnic can develop strategies to reduce this risk. The research questions and a description of the structure of the research procedures and methodologies adopted are contained in the next section, Chapter 4.

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[1] At the time of conducting this study there were 37 tertiary institutions including 25 polytechnics, five colleges of education, and seven universities in New Zealand.

[2] 'Polytechnic' is an umbrella term encompassing a range of tertiary education providers which have their origins as community colleges, institutes of technology, and distance education providers such as the Correspondence Technical Institute.

[3] Dr John Harré, Chief Executive of the first Community College at Hawkes Bay notes that there were major differences between the American institutions of the same name and their New Zealand counterparts. 'Community Colleges' in America offer two and four year programmes whereas those polytechnics in New Zealand which originated as Community Colleges started off running mainly short courses [community programmes, short 'block' and night classes for apprentices] and only later have developed longer programmes at higher academic levels.

[4] The need for skilled labour, particularly in the building and construction areas.

[5] A succession of specially funded transition education programmes were implemented by successive governments over the last decade (YPTP - Young Person's Training Programme, STEPS - School Leavers' Training and Employment Preparation Scheme, JETS, TAP - Training Assistance Programme, ACCESS, MACCESS - Maori ACCESS, and TOP - Training Opportunities Programme), forming a major growth area for the Polytechnic sector over this period.

[6] 'New Right' draws on the increasing discontent with aspects of the welfare State and government intervention in the economy. It encompasses three strands (Armstrong, 1994, 122, in Spoonley, Pearson and Shirley, Eds., op. cit.) bringing together 'classical liberalism', which values individual freedom from government interference, 'neo-classical economics', the notion of free market and the natural tendency of capitalist economies to reach equilibrium, and 'monetarist' economic thinking which favours a deregulated economy and a major reduction in state expenditure based on the premise that government spending was the root of the prevailing economic crisis.

[7] These were particularly noticeable at institutions with large trade training departments for example, the Open Polytechnic and Hutt Valley Polytechnic. In the past three years the Open Polytechnic made 70 staff redundant, largely in the technology areas according to the Wanganui Chronicle, 18 May 1994.

[8] In 1992 the Wairarapa Community Polytechnic required Ministerial intervention to prevent it from insolvency.

[9] 'Disadvantaged' students, according to this scheme, are of New Zealand nationality or permanent residents who are either school leavers, (under 18 years with low qualifications) or registered with New Zealand Employment Service (NZES) as a job seeker for at least 26 weeks, (and either have low qualifications or have been referred through an indepth interview with NZES or Workbridge). Low qualifications are defined as less than three school certificate subjects higher than B1.

[10] 'Formal' education is defined by the Ministry of Education (Education Statistics of NZ, 1992, 18) as education leading to a recognised qualification. Under the restructured education system, qualifications are recognised by either the New Zealand Qualifications Authority, the NZ Vice-Chancellors Academic Sub-Committee or the Academic Board of a Polytechnic or College of Education.

[11] According to Education Statistics of New Zealand (1993, 64).

[12] LINK programmes: a series of programmes run for secondary students which introduces them to the polytechnic and other tertiary providers while they still remain at school.

[13] In 1990 all institutions received 12 monthly payments, the same as they received in 1989, plus a growth factor of 6.5% applied to their total funding.

[14] In 1991 the Ministry set a standard tertiary fee of $1.95/hour for programmes funded through the bulk grant to polytechnics. When the mandatory students' association fee of $0.09 and the class materials fee of $0.46 were added, this became a total charge of $2.50 per hour.

[15] Recent indications from the Ministry that all subsidised community education (including school night classes) may cease (because community education is seen as a private rather than public good) would curtail polytechnics' abilities to provide lifelong learning opportunities for communities as described in the purpose statement of their charters. If this occurs any community education programmes will be forced to run on a 'self support' or 'user pays' principle, effectively limiting access to the more affluent, white, middle class participants.

[16] Comparison of recent polytechnic brochures and information booklets with those printed prior to the 'reforms' indicate a change in the focus of 'community' course offerings.

[17] All information on fees provided by S Town, Associate Director, Administration and Resources, Wanganui Regional Community Polytechnic.

[18] This information supplied by WRCP's Student Allowances Officer, Cheryl Harrison

[19] The government introduced the notion of a $1,000 per Equivalent Full Time Student up to a maximum of $250,000 infrastructure grant available to smaller tertiary institutions in order to address the difficulties in economies of scale between large and smaller institutions, and to try and reduce inequities resulting from the introduction of the EFTS bulk funding scheme.

[20] This anecdotal information supplied by Cheryl Harrison, Students Allowances Officer, WRCP.

[21] Whilst Beatson (1990) warns of the dangers of equating socio-economic scales with class, their use can indicate relationships between various factors and particular groups.

[22] The Education Amendment Act, 1990, requires polytechnic councils to encourage the greatest possible participation by the communities they serve, to maximise the educational potential of all members of those communities, with particular emphasis on those groups which are under-represented amongst the students of the institution.

[23] Education & Training Support Agency (ETSA) is a government agency which promotes a range of training options designed to raise New Zealand's skill levels, including TOP programmes, Skill New Zealand (the industry training strategy) and Skill Enhancement (formerly Maori Vocational Training), according to ETSA (1994).

[24] NZPPC is the NZ Polytechnics Programmes Committee which has been established by APNZ, the Association of Polytechnics NZ, to undertake the NZQA course approval and accreditation tasks delegated to it.

[25] Some caution must be applied here as Garrison (1985) maintains there is little evidence to support a conceptual link between participation and drop out.

[26] Apparently this was only carried out at Victoria University.

CHAPTER 4:

METHODOLOGY

This chapter describes and justifies the 'responsive' approach adopted in the case study of drop out from Wanganui Regional Community Polytechnic. This research was guided by three central questions which evolved from the concerns of WRCP administrators, but these were not seen as limiting and hence the methodology employed developed as issues emerged over the two year period of the study.

Data gathering included a survey of archived information, and student questionnaires, augmented by the perceptions gained by numerous informal discussions with various polytechnic staff.

The intention was to establish whether or not a pattern of drop out existed at Wanganui Regional Community Polytechnic (WRCP) in terms of student demographic characteristics and types of attendance, Polytechnic programmes and schools; timing and style of dropping out and reasons for withdrawal.

4.1 Research Aims and Questions

The move to 'Bulk Funding' of all tertiary education in New Zealand resulted in a heightened level of awareness amongst providers of both the direct and indirect costs associated with student drop out. Small, more recently established polytechnics, such as Wanganui Regional Community Polytechnic, appeared to be particularly vulnerable to the effects of the recent changes in the funding of tertiary education. Administrators at WRCP were concerned that the costs associated with the loss of students might threaten its economic viability. In particular they feared that the greater financial pressures for students resulting from changes to government financial support and higher course fees might increase student drop out. This research, thus, responded to the concerns of WRCP administrators about the extent and nature of student drop out. Administrators wanted to know about the magnitude of the drop out problem and what could be done about it.

The purpose of this study was to explore student drop out from Wanganui Regional Community Polytechnic and, from the understanding gained of both the process and the problem, to suggest strategies to reduce drop out. A major function was to establish a baseline of drop out data in order that effective ongoing monitoring can occur to ascertain any future trends or changes.

The literature review highlighted a number of issues in relation to polytechnic student drop out in the New Zealand context. Consideration of these issues led to the development of three central questions which guided this study.

1. What is the nature and extent of drop out at Wanganui Regional Community Polytechnic, in terms of:
    *   type of attendance (full or part time study)
    *   polytechnic programmes and schools
    *   student demographic characteristics
    *   timing of drop out
    *   style of drop out

2. What are the students' self-reported reasons for dropping out and how do these differ from the reasons perceived by programme coordinators at the Polytechnic?

3. To what extent are the current changes in funding for tertiary education perceived by students and staff to have contributed to drop out?

4.2 Method

4.2.1 Overall Approach

As well as highlighting issues which warranted further investigation, the literature review also raised concerns about methodologies commonly employed in drop out research, notably the reliance on survey (Tremaine, 1979), adoption of a retrospective approach (West, 1985, a) and the failure to separate out data gathered from different types of students (West et al., 1987).

A rejection of these previous approaches in favour of case study was suggested by the exploratory nature of the research questions - little previous work has been conducted in the New Zealand polytechnic sector and the theoretical underpinning for drop out research is in its developmental stages. Case study is an indepth study focusing on a single situation, on an event, or on social behaviour in a particular location, (after Hitchcock & Hughes, 1989). Through case study the factors influencing the situation can be identified so that key variables, issues and theories can be isolated and discussed. Thomas (1985) maintains that small scale case studies are the most productive way of helping understand drop out. Indeed, before generalisations can be developed about drop out, Garrison (1987) argues that researchers must gain clear conceptualisations of the essential character of drop out in specific situations.

The complexity of the topic also indicated the need for a case study approach. The literature review suggested there may be directly measurable costs associated with student drop out, both to the individual and the polytechnic, in terms of loss of income and wasted financial investments. However, the importance of non-pecuniary costs in the 'cost/benefit' analysis, which the 'integration' and 'investment' theories suggest students undergo, prior to dropping out, was also highlighted by Johnes, (1990). Indeed, the most recent models developed to account for drop out (Bean & Metzner, 1985; Kember, 1989; Powell et al., 1990) demonstrated remarkable similarities in their portrayal of drop out as a complex process resulting from the interaction of many variables - variables associated with the students' background and characteristics, with the institution and with the environment.

Case studies aim to develop new knowledge and solve practical problems according to Hitchcock & Hughes (1989). Further support for a case study approach is provided by West et al. (1987), who argue that detailed information gathering at the work face of the institution, which prompts individualised strategies for that institution, is the only way to have any effect on whether a student persists with that particular course in that particular institution. This practical aspect was of particular importance for the present study which responded to administrators' concerns about drop out from the Polytechnic.

Hence a case study approach was selected as the best way to carry out this investigation into polytechnic drop out. This approach is flexible and responsive, incorporating an "eclectic methodology" (Adelman, Jenkins & Kemmis, 1976) to develop more meaningful description of events as they occur. The latter point was a critical factor in the selection of a case study approach for this investigation as many previous researchers (notably West, 1985, a) had questioned the reliability of post hoc designs because of the possible influence which subsequent events have on student recollections. The data gathering tools developed as part of this methodology, then, needed to be applied in such a way that they were able to collect information at the time a student withdrew. This requirement necessitated a longitudinal design. Willett & Singer (1991) explain that researchers adopting this strategy follow groups of students who share a common initial status. A longitudinal design is considered by Pantages & Creedon (1978) to be superior to other drop out research designs because it permits an exploration of factors that affect dropping out at the very time they are exerting their effects, a view endorsed by Australian researcher, West (1985, a).

Because this research concerns people, as individuals, groups and as part of an institution, it was deemed appropriate to adopt a descriptive, rather than experimental, approach. Indeed, most educational research employs methods which are descriptive for the same reason, according to Cohen & Manion (1985). Calling on Best's (1970) definition, Cohen & Manion explain that descriptive research is concerned with 'what is' or 'what exists' in relation to some

preceeding event which has influenced or affected a present condition or event. In this instance, the research is concerned with the possible effects which changes in the funding of tertiary education may have had on polytechnic drop out.

The broad base of case study allows for a 'generative' methodology (Alton-Lee and Nuthall, 1992) in which the practice and findings of the research can influence and modify the methodology in order to explore issues as they emerge. Thus, whilst the three central questions which guided this research defined the parameters for study, care was taken to ensure that data gathering and analysis procedures did not inadvertently exclude critical influences on drop out through unacknowledged bias in data selection or sampling, in accordance with Alton-Lee & Nuthall's (ibid.) advice.

Through his work on responsive programme evaluation, Stake (1980, b) highlights some of the issues which needed to be considered in the adoption of such a responsive approach in this study of student drop out. By definition Stake (1980, b, 77) contends that a responsive approach carries with it the expectation of performing a service, of responding to the requirements of a specific audience for information, of being useful. As a consequence, a key component of a responsive approach is the researcher's familiarity with the interests and language of the audience. The researcher should have a good sense of whom s/he is working for and their concerns, according to Stake (1980, b, 76). As such, the responsive approach can be criticised for its subjectivity and its bias towards the concerns and values of the educational establishment. However, Stake argues that subjectivity can be reduced by replication, and by operational definition of ambiguous terms.

The inadequate attention given to questions of definition by early drop out researchers has resulted in contradictory and misleading findings, according to Tinto (1975). From the review of more recent drop out literature this criticism would seem to be equally applicable to subsequent studies and it adds support to Stake's argument. Description of the Polytechnic's policies, particularly as they affect student selection and institution initiated withdrawal, has been identified (Section 2.3) as critical to the reduction of ambiguity and to the facilitation of meaningful cross institutional comparisons, from which a general conceptualisation of polytechnic drop out may develop.

Stake also argues for the inclusion of the "different value perspectives of the people at hand," (1980, b, 77) as a critical element in the responsive approach. This notion is not new in drop out research: a number of studies (eg. Demos, 1968; Birch, 1975; Kennedy & Powell, 1976; Tremaine, 1979; West, 1985, a; Knight, 1991) sought the perspectives of other key informants (for example, tutors and counsellors) in an attempt to produce more valid 'whole' data in the face of criticisms about the honesty of students' self-reported reasons for dropping out. A difference

though, is that Stake sees much of this checking of the accuracy, relevance and importance of findings as an ongoing informal process. Guba & Lincoln (1981, cited in Lather, 1986) coin the term 'member checks' to describe this process. This idea is developed further by Lather (1986), who talks of 'reciprocity', of a give and take operating between the researcher and the researched to create conditions which generate rich, and more valid data through gaining such feedback. Lather's concept of "research as praxis" (1986, 257) aims to consciously use research to help people change their situations by encouraging "self-reflection and a deeper understanding of their particular situations" (ibid. 263).

Drop out has been identified by many theorists, mainly Powell et al. (1990), as a complex, multifaceted phenomenon. Stake seems to suggest that a responsive approach can more ably portray such complexity, "convey [a] holistic impression" (1980, b, 83) and record the uncertainties and ambiguities of reality which conventional drop out methodologies appear to simplify. Indeed, after reviewing the many disjoint and univariate studies typifying drop out research, Garrison (1987, 98) contends that "given the complexity of human behaviour it is impossible to significantly further the understanding of this problem through unsustained research efforts which look at one or two variables in isolation".

A case study approach incorporating a generative methodology, with its associated responsive elements was selected as both appropriate to the exploratory nature of the research questions, determined as a result of WRCP administrators' concerns, as well as compatible with the methodological recommendations made by previous drop out researchers.

4.2.2   Selection of the Case and Some Associated Issues

Case study is not a method but a naturalistic form of research, following an inquiry around an instance in action, telling the story of a bounded system according to Stake (1980, a). The instance is confined in this study to drop out from one institution, Wanganui Regional Community Polytechnic (WRCP), because specific situational variables (institutional and environmental factors) were highlighted by the literature review (Section 2.7.4) as having significant influence on drop out particularly for part time and commuter students. Indeed, many previous researchers (Astin, 1975; Cope & Hannah, 1975, 9; Marinaccio, 1985; Pantages & Creedon, 1978) have identified the 'fit' between the student and the institution as a critical issue in drop out, supporting the selection of one institution as the focus of the study of polytechnic drop out and explaining the necessity to document fully the institutional context.

Little research appeared to have been conducted in drop out from 'traditional'[1] polytechnics and none[2] from smaller institutions. Being a small polytechnic, it was felt that WRCP would evidence any effects of educational reforms on drop out more clearly than might be observed in a larger institution.

WRCP appeared large enough though to offer a range of educational provision, of subject areas, levels and programme duration (see Appendices 4a & b) which previous studies (Section 2.4.3) indicated may somehow be related to differential drop out rates in higher education. Like most other New Zealand polytechnics[3], WRCP's student population comprises both full and part time students, most of whom are not resident on campus and in terms of the applicability of various drop out theories, could be considered commuter students. Powell et al. (1990), consider institutional and environmental factors as critical influences in drop out and hence both the nature of educational provision at WRCP and the student population form essential components of the case study investigations.

The problem of generalisability from case study research is a major issue concerning this approach, according to Adelman et al. (1976). Case study is 'naturalistic' because the 'objects' of case study work are 'given situations': what is 'given' is a particular issue, arising in a particular context according to Kemmis (1980, 107). The ethics of case study preclude any manipulation of the situation, so it becomes strong in reality, therefore, allowing for the possibility of generalisations, but generalising about the case, rather than from it. The small size of WRCP, its origins as a regional 'Community College' and its relative 'youth' are unique aspects of this institution which give rise to questions related to its representativeness of the polytechnic sector. These questions are partially addressed by comparison of WRCP specific data with the results of a cross-polytechnic survey, initiated by the Aotearoa Polytechnic Students' Union and analysed by the researcher. However, the primary purpose of this study was to respond to the needs of a specific audience, WRCP administrators, for information and, thus, the focus of this study is primarily on the case, on drop out from WRCP.

Whilst acknowledging this primary focus, WRCP can still be regarded as an instance from a class (after Adelman et al., 1976), although justifying the study of one instance on the grounds of representativeness alludes to a set of research values inappropriate for case study, according to Walker (1986). He maintains that when one instance is studied, it is likely to be as typical or atypical as any other. Thus, it is envisaged that the study of WRCP will lead to generalisations about the case, about drop out, which may have general applicability across the polytechnic sector. However, it will be left to those readers associated with polytechnics to ask whether the findings from this study can be applied to their own situation; to consider whether the relationships between the assertions and evidence is validated by their own experiences.

In addition to the question of generalisability Atkinson & Delamont (1985) highlight a number of other critiques of case study research in education, including the problematic definition of what constitutes the boundaries of 'a case', "inadequate methods and a lack of methodological self-awareness" (op. cit., 1985, 33) and "a concern for ethics [*which*] too often supplants equally important issues of theory and method" (ibid, 37). These writers speak of a "methodological

cop-out" (ibid, 30) in case study, evidenced by obscurity of purpose, lack of conceptual structure and theory and weak implementation of research methods.

As a result of similar concerns, many previous studies of drop out have been dismissed as merely descriptive (notably by Tinto, 1975). However, Stenhouse (1981) considers that in research which is concerned with practice, interpretive descriptive case study offers a legitimate alternative to the theoretical style of explanation of human action. The latter assumes that "...the phenomena of individual and social behaviour are in principle explicable in the same terms as natural phenomena...," (Stenhouse, 1981, 15), and consequently accessible by the same methods. The role of theory in these different types of research is seen by Stenhouse as a central issue: in scientific type research theory is the crucial product, whereas in case study research "theory is a groundwork on which a different kind of interpretive effort is built...," (ibid., 31). The insight which Stenhouse provides reveals Atkinson & Delamont's critiques of case study as judgements from a particular positivistic paradigm. All the same, the issues which Atkinson & Delamont raise deserve attention in the subsequent sections of this chapter which describe how the case study approach was implemented in the present study of student drop out.

4.2.3   The Boundaries of the Case

Defining Drop Out

The importance of clear operational definitions of drop out has been stressed by both Tinto, (1975) and Stake, (1980, b). In this study, the term 'drop out'[4] is used to refer to any student who left the programme of study for which they were enroled in a given year. It includes withdrawers (those who officially indicated their intention to leave) and those lost by attrition (those who ceased to attend classes without officially notifying the Polytechnic).

This definition suggests the need for two different measures of drop out:
a)   the number of students who officially withdraw by completing administrative requirements associated with refunds and,
b)   the number of students who can be deemed to have dropped out by their lack of attendance at class sessions.

A longitudinal design was adopted, following a cohort of students from enrolment over the duration of a complete course (where the course was one year or shorter) or over one year of study, (where the programme was of several years duration or where a student was studying part time), in order to ascertain who dropped out, when and why.

The student data was collected over two successive years (1992/1993) although students are required for practical reasons associated with changing government funding and consequential fee alterations, to enrol afresh annually. Each year's enrolments were considered as a separate population for the purposes of this study of drop out. This had the advantage of allowing for the replication of many aspects of the study, as recommended by Stake (1980, b).

Although the parameters of the study allowed differentiation between drop out from different levels of programmes within any given year, it did not attempt to follow up students on longer programmes who discontinued between years (ie. decided not to re-enrol in a subsequent year of the same programme). This was mainly to limit the size of the study because of constraints of time and energy, but also because Jones' (1978) study of Auckland University found that most non-re-enrolling students had either continued with studies part time, transferred to another educational institution, or planned to return to study at some later date, making the term 'drop out' inappropriate, he claimed.

The Students

This research, then, investigated drop out from two 'populations' of students - those enroled at WRCP in 1992 and then those enroled in 1993. All full-time and part-time students enroled in both 'Formal' and community programmes were included but Prison education and Link students were not because they did not enrol (or withdraw) through the Polytechnic's central administration system in the same way as the majority of students and in many instances programmes were delivered by tutors especially engaged for that purpose at off campus locations (ie. a prison or in a school). The student populations were monitored over the year and withdrawals identified.

Through an analysis of archived refund and enrolment data, this approach enabled a comparison between participants and drop outs to be developed in line with Gekowski & Schwartz's (cited in Pantages & Creedon, 1978) recommendations. Gekowski & Schwartz maintain that the absence of a control group (the persisters) in the research design of early drop out studies resulted in many contradictory findings. Comparative studies, which aim to overcome this criticism, highlight differences between drop outs and persisters on the assumption that the more marked the differences, the greater the probability of successfully predicting drop out (Hayes, 1976). Whilst most of the comparative studies found little to differentiate between the two groups in terms of demographic characteristics (for example, New Zealand studies conducted by Boshier, 1969 and Ostman et al., 1988), Getzlaf et al. (1984) suggest that this may be due to a lack of adequate recognition of the heterogeneity of the student population. Pantages & Creedon (1978) argue that finer discrimination between student categories yields better results and clearer interpretations, a view later supported by West et al.

(1987). It was essential then, that the methodology selected for the study of drop out could ensure that data was gathered in a way which allowed for both appropriate representation and differential analysis of student sub groups. The student categories reflected variables thought to be associated with drop out from previous research and these were suggested by the research questions (type of attendance, demographic characteristics, school and programme, reasons for and timing of withdrawal and style of dropping out) but it was seen as essential that the coding of data was able to be influenced by the process of analysis and the recycling of information, in accordance with Lather's (1986) principle of reciprocity. How this process occurred will be discussed in the appropriate sections relating to data gathering techniques.

Previous New Zealand studies which looked at drop out from higher education and possible relationships with other factors, most recently Hooper (1988) and Ostman et al. (1988), found the numbers in certain potentially important demographic categories, age (under 20 year olds) and ethnicity (Maori and Pacific Islanders) respectively, were so small that they were unable to provide any really valid conclusions on this aspect. This was probably because the original population of study was also small, being concerned only with drop out from a single programme in each institution. A much larger population is required if disaggregation of data is to occur with any chance of obtaining meaningful results. Because the number of drop outs involved in this case study was manageable, there was no need for sampling and a census of data was taken. This approach ensured that the range of age, gender and ethnicity which existed amongst drop outs was recorded so that any differential drop out patterns present could be identified.

The Staff

In case studies observations are recorded, judgements documented and perspectives of participants interpreted to develop patterns of meaning. Thus, this case study, whilst predominantly focused on the students and its programmes, also involved the staff.

Staff selected for inclusion in the case study were those closely associated with students, but especially those who had the most to do with withdrawing students - the Student Services Manager (student support), the Administration Manager (oversight of refund applications and hardship grants), the Student Loans Officer (financial support), the staff of WRCP's central administration office (who handle enrolments and refund applications), the Counsellor, the Marketing Manager (career and programme advice), heads of schools and programme coordinators (these people deal with student concerns and withdrawals within subject areas) and the Staff Support Manager (assisting tutors with class management problems including motivational and attendance issues). The Chief Executive, the Associate Director and section Managers were able to contribute a more polytechnic-wide perspective as well as providing

information to supplement the archived material. The WRCP Equity Committee also had a strong interest in this research, being concerned with equal educational opportunity and barriers both to participation and success, and some members were involved in this study through 'member checks'.

The Role of the Researcher

As a Polytechnic administrator, the main reason the researcher had for selecting WRCP as the subject of this study was personal interest and ease of access. At the time of commencing this study, the researcher was employed as a member of the three person Directorate at WRCP. In her role as Academic Director, the researcher was closely involved with the Polytechnic's school and section managers and also with the development and implementation of quality education policies.

As such, the researcher was able to bring a personal perspective to the present case study of drop out. Most case studies are characterised by the integral involvement of the researcher in the case but the limited time frame available and potential ethical problems because of the researcher's role, put parameters on the degree of involvement. Indeed, some writers have raised concerns relating to researcher involvement in case study, of reliability and consistency of findings where personal relationships are involved. However, Walker (1986) believes that objectivity is acquired from the situation under study, not through personal neutrality. Objectivity is gained by applying standards of fairness and by recognising subjectivity, with the researcher as 'witness' in this situation according to Kemmis (1980, 111). The researcher had insight and privileged access (Wolcott, 1985) because of her position, but at the same time her role as Academic Director may have introduced unknown barriers in terms of total disclosure. McIntyre & Macleod (1986) describe the advantages of being a member of the same culture and easily able to understand events and the language of respondents and significant others on the basis of shared meanings. However, Wolcott highlights the loss of the detached perspective which an outsider can bring, although this can be compensated for, to a certain extent he says, by using multiple methods and obtaining information in a variety of ways to reveal any differences. Wolcott gives support to the notion of member cross checks advocated by Guba & Lincoln (1981, cited in Lather, 1986).

Scope of the Study

Tinto suggests that we need to know "to what degree and in what fashion the process of dropping out differs among persons of different gender, race, age, and social status backgrounds", (1982, 691). Analysis at WRCP was conducted according to a range of categories, including a limited range of demographic characteristics, although socio-economic variables are not included in this study and academic variables are only addressed in a limited way.

Academic Variables

Pantages & Creedon maintain that academic variables are the strongest single variable predictors of persistence and drop out available. For technical reasons described later in this chapter, the possible relationship between entry qualifications and drop out was not able to be fully examined at WRCP although some information was gathered in relation to this variable from student and tutor perceptions of drop outs' reasons for withdrawal.

Socio-Economic Variables

Lauder (1990) suggests that polytechnics have been considered by working class students as a more accessible form of tertiary education than universities. However, recent changes in funding policies have resulted in increased fees, a reduction in the amount of face-to-face delivery, and pressure to decrease student support services. Simultaneously, a change in the nature of financial support offered to students has seen a reduction in the range of allowances available, with the introduction of the student loans scheme. These changes have altered both the nature and cost of provision and possibly posed barriers for working class students, particularly mature students seeking employment through retraining. Astin (1964) found that students who dropped out were more likely to come from lower socio-economic backgrounds. Whilst Boshier's (1969) early New Zealand comparative study found little to differentiate drop outs from general course participants on the socio-economic level (a finding supported by overseas writers including Birch, 1975, and Hayes, 1976), economic conditions have clearly changed since that time. Summerskill (1962, cited by Pantages & Creedon, 1978) summarises the situation, observing that although socio-economic status is commonly believed to influence drop out research has provided equivocal results.

Socio-economic background is acknowledged as a potentially important variable in drop out, and although beyond the scope of the present study to explore, the possible relationship between government policy changes and the socio-economic background of polytechnic students is an important one to investigate. However, there are difficulties in the polytechnic sector in applying some of the traditional measures of socio-economic status, such as parental income, as the wide age distribution of the student population makes this inappropriate. Astin (1975) looked beyond the socio-economic status aspect towards some of the other aspects inherent in a person's cultural background which may influence a student's persistence in higher education. New Zealand polytechnics have traditionally attracted a much higher percentage of people from working class backgrounds than other tertiary institutions, and as such further research into this aspect is of critical importance, although once again, beyond the parameters of this study.

4.2.4 Types of Data and Data Gathering Techniques

This section discusses the particular types of data and data gathering techniques used and highlights any limitations.

The need for multi-methods and a multi-data gathering approach within case study was determined by both the complexity of the topic and a need to address validity and reliability questions, which arise through the use of a responsive case study approach.

A survey of archived information, a student questionnaire, and informal discussion with various staff are described in this section as data sources employed to explore the nature and extent of drop out from WRCP.

Archived Information

The use of pre-existing data had the advantage of providing an unobtrusive means of eliciting information, with a minimum of expenditure and time, although a disadvantage of this technique was that the data were not in the exact form in which the researcher required it. Enrolment data, refund data, Annual ('Formal') Programme Evaluation reports and administration documents were the major sources of archived information pertinent to this study.

(a) Enrolment Data

Most educational institutions collect a mass of data from students as part of normal administration procedures associated with enrolment. Enrolment data provided information about the students who participated in programmes, about the student population, in any given year. Enrolment data were used to calculate drop out rates and formed the basis of comparison between categories of individuals who stayed to complete their programme and those who left, as recommended by Pantages & Creedon (1978). The enrolment form included a statement explaining that the demographic data requested was for statistical purposes only and students were asked to "please assist by completing this section", in effect giving consent for the use of this data.

However, for technical reasons computer access to enrolment data was unavailable in the form required by the present study[5]. As a consequence student enrolment statistics gathered by the Ministry of Education from all polytechnics at 31 July each year were used to provide a context for this study of drop out. These data form a census of enrolments at educational institutions at that time according to a limited range of demographic characteristics - age, gender, ethnicity

and nature of attendance. While the data compiled do not give cumulative enrolments over an entire year, by the first of August most enrolments have been completed so that a reasonable picture of the polytechnic's student profile was assumed by the Ministry[6]. The format of the data appeared to be standardised so that student statistics for the tertiary sector had some basis of comparison both across institutions and between years[7]. Data for the 1993 cohort was derived directly from the Ministry as they had not been published at the date of completing this research. The use of Ministry[8] statistics posed obvious limitations both on the scope of this study and on the reliability of certain aspects associated with withdrawal rates. The problems, solutions and limitations associated with enrolment data are outlined more fully in Appendix 3. Definitions of the terms 'full time' and 'part time' and how these were interpreted in the study so that drop out rates by nature of attendance could be calculated are also described in the same Appendix.

(b) Refund Data

These data provided information about students who officially withdrew by completing administration requirements. Students withdrawing from WRCP were required to complete a form which established the applicant and their course and any refund entitlement in accordance with WRCP's refund policy. By cross-referencing refund application data with enrolment data, existing data collection procedures were able to provide the information required to calculate the overall institutional withdrawal rate and withdrawal rates for individual programmes and schools. The data was also disaggregated to yield information about part time and full time drop outs, and about the gender, age and ethnicity of withdrawn students. Once again, because individual students were not identified, confidentiality was not an issue.

The dates of the refund applications provided a chronological context for these data and enabled commentary on the timing of withdrawal to be developed. Assistance in the interpretation of the findings generated from these data sources was sought from student support and administration staff and the service managers associated with enrolment and withdrawal procedures. These people were contacted to ascertain their views on different patterns and theories about drop out. They were presented with graphic information on overall WRCP student withdrawal patterns to gain their perspectives on these. Two main theories emerged. This information was subsequently used as a basis for follow-up discussions with heads of schools. The overall data were segregated to form separate month-by-month pictures for each school over the two years. The aim was to ascertain whether there was any pattern associated with school events over the academic year as Tremaine (1979), Kember (1990) and Woodley & Parlett (1983) had suggested. Heads of schools were presented with this graphic material for their own area as well as information about drop out across the whole polytechnic. They were presented with the two main theories developed after consultation with the previous

group and asked to ascertain whether there were any discernable patterns, in particular in relation to programme activities (eg. assessment schedules and breaks in the programme) and school specific withdrawal data. Both oral and written comments were received, and in the latter event, some fuller clarification by telephone was sometimes required.

(c) Annual ('Formal') Programme Evaluation Reports

The definition of drop out utilised in this study involved both those students who officially withdrew (indicated by refund applications) and those lost by attrition - those who ceased to attend classes without officially notifying the Polytechnic. Student loss by attrition was difficult to establish. Only through lack of attendance at class sessions could the total number of students deemed to have dropped out be estimated.

The Ministry of Education no longer has register of attendance requirements (now that institutions are 'bulk funded') and with NZQA's[9] focus on learning outcomes, there is greater emphasis administratively on achievement records, with attendance data now more a matter for individual tutors. The modularisation of many 'Formal' programmes has increased difficulties of monitoring attendance and subsequently, drop out.

However, WRCP had in place a system of annual programme reporting through which it appeared this information on overall drop out could be extracted for at least some of the programmes. The use of existing data collecting procedures had the advantage of being an independent data source, free from possible researcher bias. Another advantage was that these reports formed part of WRCP's public domain information, avoiding potential confidentiality issues. As part of quality assurance mechanisms monitored through its Academic Board and by NZQA, programme coordinators are required to complete programme evaluation reports (Appendix 4 a/b) annually for all 'Formal'[10] programmes under their control. The data for the reports are gained largely from standard student end-of-programme evaluation forms, class attendance registers, and programme coordinator's first hand knowledge of the students. Although the reports were not designed to cover all polytechnic programmes they were seen as providing a useful reliability check against data derived from the Polytechnic's central administration archives. Comparison of data from programme reports with refund data was planned to ascertain any differences between drop out from 'Formal' programmes and those from Polytechnic programmes in general. As well as providing information about programme developments, these reports detail the number of students enroled and those subsequently withdrawn by category: Maori, Pacific Island, Women, and Disabled, in accordance with Equal Educational Opportunities (EEdO) Ministry of Education reporting requirements (Appendix 4a). The same information was also sought by part-time/full-time categories in 1993 (Appendix 4b). Age data were not required in 1992, but these reporting categories were also added to the 1993

programme reporting format. More space was provided in the revised 1993 form for reasons for non-completion of programmes and in addition programme coordinators were specifically asked for numbers as well as commentary.

Programme coordinators are asked to give the "main reasons for students non-completion" as part of the same report. This question was seen as particularly important because it allowed for the possibility of a comparison of student and programme coordinator perspectives on reasons for dropping out, as suggested by a number of previous drop out researchers notably West, 1985, a.

The annual programme evaluation report form also asked for information on the planned destinations of students after leaving the programme. Whilst this question was included in the annual programme report in order to meet Ministry of Education requirements relating to the 'success'[1] of students completing 'Formal' programmes of study, it was thought to provide a potentially useful comparison between the goal commitment of persisters and drop outs (Tinto, 1975) and hence a similar question was included in the student questionnaire also. While community education programme coordinators are encouraged to evaluate their programmes this was not mandatory and hence there was no mechanism for deducing attrition rates from community programmes.

(d)   Administration Documents

This source of information was used primarily to develop a picture of the institution and its environment, as factors associated with these contexts had been identified by drop out theorists as important influences. This information was also used to ascertain how changes in the funding of tertiary education had impacted on this particular polytechnic and its students.

Administration documents included promotional material (the prospectus, brochures and booklets developed for public presentations); the Polytechnic's charter, quality system documents, policies and annual reports; minutes of the Polytechnic's council and management team meetings and various information packages developed for the Ministry of Education. Whilst Bulmer (1977) notes that such official documents may be biased, this source provided a mass of pertinent data with little expenditure of time or expense.

Access

Much of this data was in the public domain and freely available from either the Polytechnic library or from the display stands beside the enrolment counter at WRCP, and so confidentiality was not an issue. Minutes of meetings and ministry related data were available from the

Polytechnic central filing system, to which the researcher had access through her position. The Chief Executive Officer had given permission and support for the conduct of this survey, and this included access to the data required (Appendix 5). Confidentiality was applied through the notion of informed consent prior to publication of the study. (Appendix 6: ethical considerations are discussed more fully in a later section). This source of information was accessed in a rather informal and incremental way in that the researcher was aware of particular relevant issues and events and this data merely provided the evidence and/or specifics required. In general, investigations were restricted to administrative documents over the period 1989 onwards.

Questionnaires

Questionnaires were selected as the most appropriate method of eliciting information about why students drop out because they are known to be able to quickly and cheaply gather both qualitative and quantitative information from large numbers of people. This was an important consideration because the number of withdrawals could not be predicted in advance - for example, although 148 students had withdrawn in 1991, the year prior to the commencement of the study, WRCP administrators were concerned that the drop out rate was likely to increase as a result of the flow-on effect of recent changes to the funding of tertiary study. This method is considered (by Fox, 1969) to be appropriate for use where the settings are known and the data required reasonably well defined by the statement of the research problem.

Two questionnaires contributed data to this study - both were initiated in 1992, but their focus of study and format varied - one was concerned with drop out from the polytechnic sector - whereas the other was restricted to drop out from WRCP. Each will be discussed in turn.

a) A questionnaire of drop out from the polytechnic sector

This questionnaire of drop out from the polytechnic sector was initiated by the Aotearoa Polytechnic Students' Union (APSU) but collation and analysis was undertaken by the researcher.

WRCP administrators feared an increase in drop out because of changes in the funding of tertiary education. Similarly APSU were also concerned that student withdrawal was on the increase because of recent changes to fees and allowance policies introduced by the last two governments. APSU were worried that students might be forced to withdraw due to financial pressures, and hence initiated a national survey in 1992, aiming to provide information to substantiate their case for policy review to government.

The questionnaire format (Appendix 7) was an adaptation of one designed for the University Students' Association. Apparently this form was planned for use at Victoria University though attempts to ascertain how the form was developed were not successful due to changes in personnel and at the time of writing this the research findings had not been published. In the questionnaire students were asked to select the most important reasons for deciding to leave the polytechnic from a range of 21 factors clustered in academic, personal, and financial categories. The questionnaire was a fixed format, scaled response type allowing students to indicate the degree of importance on a three point scale. The questionnaire was an entirely voluntary affair - students officially withdrawing were asked by administration staff of each polytechnic to complete the form which was then forwarded to APSU. Unfortunately this technique led to a very poor response rate (only 199 responses from all polytechnics in New Zealand) and because there were no contextual questions, it was impossible to tell how representative this accidental sample was. Indeed, because the Students Association was keen to get data supportive of the case they wished to present to government, awareness of this by respondents may have influenced students with financial problems (more than people withdrawing for other reasons) to respond.

Further problems associated with the methodology were revealed when APSU was contacted to get feedback on the results. Apparently the rated response format had been designed for computer analysis but unfortunately, because of a lack of financial support and technical expertise, APSU had made little headway in their efforts to get this done. Hence the researcher conducted a crude manual count and analysis to ascertain which were the individual factors rated most commonly as 'very important' in influencing withdrawal.

The literature review indicated that there had been little research conducted into leaving behaviour associated with New Zealand polytechnic programmes. Thus, whilst the survey questionnaire initiated by APSU can be criticised for some aspects relating to the methodology, it was both useful and timely because the questions it posed concerned the role of finances and course satisfaction in a student's decision to withdraw. These aspects had been raised by earlier researchers working in other settings, and they were thought to be also relevant to drop out from WRCP. The most valuable aspect of the APSU survey was probably related to the fact that it occurred at the same time, in the same socio-economic context, as the case study of drop out from WRCP was initiated and hence the findings of the former may serve to illuminate those of the latter.

APSU were also concerned that recent government changes to financial support for students may additionally be posing barriers to participation. However, a telephone survey conducted by marketing personnel at WRCP (see Appendix 8) to follow up non-enrolling enquirers, did not provide support for this notion.

b) WRCP student questionnaire

Quantitative data on drop out from WRCP appeared to be easily derived from archived information or generated through existing procedures. The more qualitative aspects of drop out behaviour concerning why students left was sought through a questionnaire.

Students' reasons for leaving seemed as though they might give some insight into the 'cost/ benefit' analysis which occurs prior to withdrawal according to the two major conceptualisations of drop out (the 'investment' and 'integration' theories). Financial reasons were of particular interest in this study because of recent changes to tertiary funding which decreased financial support and increased the costs of studying.

Whilst some previous researchers have criticised the use of questionnaires to elicit such information, these criticisms have generally centred on the retrospective nature of many studies (Willet & Singer, 1991) and their dependence on survey as the predominant methodology (Tremaine, 1975). In addition, sampling problems and poor response rates are common concerns for researchers employing this method (Dixon, Bouma & Atkinson, 1987). The researcher aimed to overcome such critiques through careful attention to the design and administration of the questionnaire.

Administration

The questionnaire was incorporated into an existing form used by students wishing to apply for a refund of their fees when they withdraw (Appendix 9). By eliciting information at the time of withdrawal the reliability of the results would be enhanced as the possibility of subsequent events affecting student recollections (West, 1985, a) would be reduced. Problems of tracing past students to survey them was also avoided by this strategy.

Approval to incorporate the questionnaire had to be negotiated with the Administration Manager and a condition of the approval was that the final refund form was not extended beyond a single A4 side so that staff handling time and photocopying costs were kept to a minimum. Besides the obvious cost savings benefit, introducing the survey questions in this way was thought to maximise the response rate because the refund application would frequently be completed at central administration. The refund form had always been 'self administered' by the applicant and by continuing this process it was intended that any interview-respondent effect between the office staff and student would be minimised.

A census of withdrawing students was preferred because it eliminated problems associated with sampling. By using a questionnaire (rather than another survey method such as interviewing) it

appeared that a census of withdrawers would be manageable within the time and resources available to undertake this study. Another advantage of this method was that ethical issues, such as the invasion of privacy, the necessity to gain informed consent, and the right not to participate, could easily be taken care of because the participants could decline to respond to this section of the form. However, to encourage all leaving students to respond to the questionnaire, the name of the form was changed from "refund" to "withdrawal" and a statement outlining student allowance requirements with respect to absences inserted. A five day unexplained absence is the period after which administrators are required to initiate the completion of the form. This was a change from past procedures which only required students seeking a refund to complete a form. A problem which became evident as the study progressed was that students frequently ceased to attend and, not requiring a refund, they failed to complete a form, introducing an unforeseen element of bias into the study of the withdrawing populations. The extent of this problem only became obvious after data derived from class attendance registers (through Annual ('Formal') Programme Evaluation reports) was compared with that derived from refund forms.

Questionnaire Construction

Dixon, Bouma & Atkinson (1987) consider that short questionnaires have a greater likelihood of being answered, so in view of this, and in consideration of administration's restrictions regarding length, two questions only were developed and added to the refund form.

    (i) Question One: Reasons for Withdrawal

    "My reason for withdrawing from the course/s is" (2 lines for response)

Student's reasons for withdrawing from the programme were sought through a simple open ended question which allowed students to record several reasons, if they wished, in line with the findings of Woodley and Parlett (1983) and Kember (1990) that withdrawal is not mono-causal but a rather more complex phenomenon. This style of question also had the advantage of allowing the respondent to express themselves in their own way, a strategy known to enhance the response rate. However, most respondents were found to give only a single reason for leaving their programme of study.

The Administration Manager observed that during the processing of refunds other reasons often emerged and, in some cases, a sense of personal failure for the individual. The WRCP Student Loans Officer confirmed that withdrawing students often expressed such feelings, whatever the official reason they gave for withdrawing.

Known limitations of questionnaires (Tuckman, 1978) in eliciting personally sensitive and revealing information from respondents were highlighted by these comments. These problems may have been exacerbated by the lack of confidentiality of responses. The students were identifiable by name and programme (necessary in order to process refunds for those eligible) and where a student chose to complete the questionnaire in the office the presence of administration staff may have made them feel less able to be open and honest. They may also have felt rushed, explaining the general brevity of responses, most of which were found to comprise a single word or phrase.

Other limitations of the approach were its lack of flexibility and responsiveness - the same question was asked of all respondents, and there was no chance to check out any ambiguity or to ascertain that the meanings were as intended.

The greater freedom afforded respondents in formulating their own answers made the collection and analysis of comparable data complex. Hughes (1990) is critical of questionnaires because they are typically based on the researcher's hypothetical expectations of their results, rather than mere curiosity. He argues that the numerical averaging techniques frequently employed in data analysis homogenise participants responses, that is they reflect the 'typical', disguising variations. This point was relevant to the coding of students' responses to the first question. Calling on the work of Potter & Wetherell (1987), Thorburn (1994) explains that coding, the process of sorting data into manageable pieces, is clearly differentiated from analysis but that data collection and data analysis are mutually interactive, so that in the process of identifying categories the researcher may shift into aspects of analysis, which in turn inform coding. Thus, in this study categories for coding data were suggested by the students own responses and developed after consultation with staff whose role brings them into contact with withdrawing students (the process used is detailed in Appendix 10). This process resulted in quite different categories of reasons than had been suggested by the literature review.

(ii) Question Two: Plans After Leaving the Programme:

"What are your plans after leaving the programme (please tick one)"

☐ to employment,   ☐ to further education and training,

☐ to domestic duties,   ☐ to unemployment,

☐ overseas,   ☐ or not known.

Marinaccio (1985) suggests that some level of drop out is inevitable because many students withdraw for personally positive reasons such as a new job, or the opportunity for further training, and hence this fixed option question offered a selection of six responses. While this style made the analysis of data easier, fixed format questions are known to yield less information to the researcher than open-ended questions. Indeed, fewer people responded to

this question than the preceeding one, possibly because in some instances, the reason given for leaving (an attractive job opportunity) coincided with their planned destination (employment). Where both questions were answered, the respondents selections to this particular question proved useful in clarifying the meaning of the response to the previous 'reason' question, in effect providing an equivalence check, as advocated by Böhrnstedt (1983, 85). He maintains that such techniques increase the reliability of findings and while the two questions were not seeking exactly parallel information, the 'reasons' for withdrawal and planned 'destinations' after dropping out are related components of the complex decision making process associated with leaving behaviour.

This second question allowed some comparison with the destination of persisting students from the same cohort, as a similar question was also an established part of Annual ('Formal') Programme Evaluation reporting alluded to earlier in this section.

The annual programme evaluation form used Ministry EEdO reporting categories: Employment, further training, leaving the area and "other". Student plans were derived from their selection of one of these four choices in the standard end of programme evaluation forms from which programme coordinators compile the annual programme evaluation report for the academic board. Discussion with the service managers and administration staff who most frequently deal with leaving students suggested that these response choices were both unclear and too limited. The "leaving the area" ministry category for example, could encompass both the "to employment" and "to further training" reasons. Staff suggested that the "overseas" destination was a more useful category, as many young people in particular, had given this reason in the past. The further training option was expanded to "further education and training" to give the idea that it included all types of further learning.

Staff also remarked that a lot of students gave reasons for leaving associated with "domestic duties" - for example, the need to look after a sick child - and hence a new category to cover these reasons was included. The "not known" category was also added to the list of choices because it seemed important to affirm that it was 'okay' not to have made a choice about a new future direction yet. It was expected however, that students selecting this option might indicate 'push' factor(s) such as course dissatisfaction, rather than 'pull' factors (Woodley & Parlett, 1983) in their answer to the first question, and it was seen as important to allow for this, not to imply by the choices offered that students were only leaving because of a re-evaluation of their career options.

Trialling the Questionnaire
Summer School Trial

The refund forms were adapted in time for the Summer School of early January 1992 and made available for use, should anyone withdraw. WRCP's annual Summer School offered an ideal opportunity to trial the questionnaire because it occurred prior to the normal academic year and, whilst it was of short duration (occurring a week into the new year period), it encompassed a range of short workshops and seminars. About 300 people enroled for the Summer School in January 1992 and from these 26 student withdrawal forms were completed. Analysis of the forms indicated this represented 27 withdrawals (one form had two withdrawals indicated on it) and this flagged a potential problem: the MIS at WRCP had no reliable mechanism for ascertaining whether withdrawal from a single module was a partial withdrawal (drop down) from a full time student or a total withdrawal from a part time student. This point had implications for the reporting and significance of the withdrawal figures. Should the study of drop out focus on the number of students withdrawing or the actual number of withdrawals? It was decided to identify the total number of occasions of withdrawing from either programmes or individual module(s), on the basis that each of these was the product of a separate 'cost/benefit' analysis.

Analysis revealed an immediate problem with using an existing procedure to hook the questionnaire onto. It was found that this form was also used to refund people because of cancellation of courses due to lack of numbers (this involved 12 people) and to refund money to participants who were completing their programmes but who had won study grants. However, these administrative uses of the form were clearly indicated by office staff and, thus, this aspect was not considered by the researcher as an issue affecting the integrity of the study. There were, thus, only three people identified as genuine withdrawals from the Summer School: of these, two gave their reasons for leaving as "change of tutor" and a third person had left for personal reasons after being interviewed by the Summer School coordinator. The second question was not answered by any of these three respondents. However, as most students joined the Summer School programme as part of their holidays (it runs over the new year statutory holiday period) the options were probably not seen as being as relevant to these participants as to students on courses during the regular academic year. Thus, this lack of response to the second question was not considered of great concern at this point.

March Trial

To ensure that the questionnaire was also appropriate to students on 'regular programmes', a trial analysis of all withdrawing students was completed at the end of March of the same year and a report presented to WRCP's management team on 7th April, (Figure 4.1). There was a

good response to the first question with all students who completed the form giving some reason. At this stage, 27 full time and 37 part time students had withdrawn for a wide variety of reasons. The second question on destinations was completed by only about half of the respondents - most said they were leaving to go into employment. Some respondents clearly thought this question was a duplication of the first, notably where they had indicated they had found employment or been accepted into another course (presumably their first choice) as their reason for leaving.

FIGURE 4.1

MARCH TRIAL - REPORT TO MANAGEMENT TEAM 7 APRIL 1992

FULL-TIME WITHDRAWALS/REFUNDS

as at 31 March 1992

NAME	COURSE	REASON
	Cert. Leisure Studies	Now been accepted on Cert. Outdoor Rec. Tai Poutini Polytechnic (Greymouth)
	Social Services	Found employment
	Office Systems	Accepted into Nursing School
	Leisure Studies	Personal
	Receptionist Skills	Financial
	Social Services	Found Employment
	Fine Arts Year 2	Financial
	Cert. Leisure Studies	Hospital
	Computer Graphics Design	Found Employment
	Office systems	Sick Child
	Social Services	Health
	Agriculture	Solo Parent
	NCB	Gone into Business
	BEETS	Financial
	CBC	Going Overseas
	Social Services	Overseas
	NCB	Found employment
	CBC	Found employment
	CGD	Financial

PART-TIME/COMMUNITY EDUCATION WITHDRAWALS

37 people withdrawn
Examples of reasons: going overseas; domestic reasons; found employment; course too advanced; over-committed; medical; financial; personal commitments

Some problems were identified as a result of this trial analysis. Some discrepancies in findings were found to be the result of multiple module enrolments which were handled differently by the office staff. Sometimes this was because of the way the student had lodged their withdrawal (on two separate dates); sometimes this was because the enrolments were for modules in different schools (sometimes the office staff were found to have initiated two separate forms but on other occasions combined several withdrawals on one). Sources of potential error involved withdrawing students whose courses had been cancelled due to inadequate numbers (these were all subsequently identified and removed from the sample, as noted in the Summer School trial); students who had (somehow) been identified as withdrawn although (after telephone follow up) were subsequently found to have never enroled in that particular course, and courses which were mis-categorised. The most common categorisation error occurred for courses with Maori names: these were frequently attributed to Maori Studies, when they belonged to other schools, notably Community & Health. These problems were discussed with administrative staff and thorough checking ensured they were eliminated from the final data. This exercise confirmed that the questionnaire was eliciting the type of information sought, despite the problems alluded to, and the usefulness of this data to the heads of schools and senior managers. At this meeting heads of schools requested that the information on withdrawn students being generated through this questionnaire be forwarded directly to them, so they had the opportunity to follow up any issues raised.

Member Checks and Informal Discussions

In the 'responsive' approach (Stake, 1980, b) adopted by this case study, a variety of staff (those involved and their selection was detailed previously) were able to make valuable contributions both in providing information and making judgements on the basis of the knowledge of this particular 'instance'. This process was ongoing and informal over the duration of the study. It involved the provision of actual information (the marketing manager, for example was able to provide information on the area of origin of enrolling students) as well as assistance with the development of data gathering instruments (as described in the development of the questionnaire). 'Member checks' (Guba & Lincoln, op. cit.), involved staff closely associated with students checking the accuracy and importance of data. 'Member checks' were also associated with the process of identifying concepts, in developing categories (as described in the coding of the questionnaire) and in creating meaningful interpretations of emerging patterns (for example, of withdrawal patterns).

4.2.5   Ethical Considerations

As Jenkins (1986, 221) points out "others must live with the consequences of these findings". Because case study is rooted in real life situations, Jenkins maintains that it is more likely to expose those studied to critical appraisal, censure and condemnation. Whilst precautions had

been taken through the size of the populations studied, the method of data presention and the time lapse of data release to protect the confidentiality of individual students, the introduction of the Privacy Act, 1993, in July of that year raised a potential dilemma for this research project in relation to the use of student data for research purposes. This Act provided more stringent guidelines for the protection of confidentiality of personal information entrusted to the Polytechnic, including information about past, present and prospective students and staff. However, because no students are individually identified through the method selected to present the results, the use of enrolment and refund data in the study was found to constitute an exemption in terms of compliance with the Privacy Act principles. The Polytechnic's enrolment form, which is signed by a student, legally constitutes a contract for service binding on both the Polytechnic and the student. Since the introduction of the Privacy Act this form has made more explicit consent relating to the Polytechnic's use of data provided, whereas in the past there had only been reference to the use of data for statistical purposes and an implicit understanding that the data provided would be used by the Polytechnic for administration purposes, such as the monitoring of drop out.

In the previous sections (4.2.4) confidentiality issues pertaining to data collection have been noted, particularly in relation to the WRCP questionnaire. Although the administration of the questionnaire had been planned with concern for confidentiality, it appears that the lack of anononymity and the physical conditions under which some students may have completed the withdrawal forms (it seems that some were filled out at the administration counter, even though a separate space is available in the office for the purpose of completing forms) gave rise to unanticipated aspects regarding confidentiality which may have limited the honesty and openness of responses.

Most other information used in this study would be considered in the public domain: enrolment and refund statistics for example, are provided to the Ministry of Education and subsequently published; Annual ('Formal') Programme Evaluation Reports are forwarded to NZQA/NZPPC after presentation to WRCP's academic board and the education sub-committee of the Polytechnic Council.

While the confidentiality of student data was protected by the anonymity gained through the collation of data, the reputation of various schools and indeed, of the entire Polytechnic was a potentially sensitive issue in relation to publication. Thus, this study applied, to a limited extent, Lather's (1986) principle of reciprocity. Administration staff, student services personnel, service managers, heads of schools, and the students association were informed of findings gained from the various sources. "Recycling description, emerging analyses and conclusions" (Lather, 1986, 39) occurred by way of informal discussion, (both by telephone and face to face), and sometimes by way of written correspondence, in order to negotiate the meaning of these

findings and to safeguard their truthfulness, before the release of any information. This approach was taken to ensure the validity of the data as well as affording some protection to Polytechnic staff from the situation in which information against their interests and those of the Polytechnic is released. However, Codd (1988, 34) points out that sometimes the researcher faces a dilemma of balancing confidentiality against "the right to know" as some data needs to be part of the public record. Advice from the Chief Executive of the Polytechnic and the Massey supervisors involved with this project was available should such a dilemma have been experienced.

This study was a responsive case study in that it arose out of WRCP administrators' concerns about the impact of changes in government funding of tertiary education on student drop out. Whilst Snook (1981) argues that the researcher is obliged to record, analyse and publish data in such a way that it does not allow for the identification of individuals, to provide useful information to those within the organisation, it was important that particular areas were identifiable. Confidentiality was, thus, applied through the gaining of prior informed consent (Appendix 6) relating to all data, interpretations and the release of information (after Codd, 1988) rather than through the protection of individual identities.

The research proposal had been presented to the WRCP research and ethics committee prior to its commencement and approval for its conduct was given by the Chief Executive (Appendix 5) who was very supportive of this research project which he saw as generating useful information for the polytechnic.

The researcher's role within the institution raises ethical issues over and above those already noted and these were discussed in Section 4.2.3.

4.2.6   Issues of Reliability and Validity

The approach taken in this case study incorporates the elements Guba (1981) considers essential in research design to ensure 'trustworthiness' of the findings including prolonged data gathering at the site and triangulation, using multiple checks to corroborate data through the use of documents from the site and the perspectives of key informants.

Whilst the application of triangulation (Denzin, 1978, 1988), is considered useful in order to overcome potential criticisms relating to the reliability of qualitative data and the validity of the case study approach, Mathison (1988) notes the main value of triangulation lies in providing levels of evidence from which plausible explanations can be derived. Each research method implies a different interpretation and Denzin (1988) suggests that interpretations developed from triangulation are stronger than those derived from a single method. Multiple triangulation is said

to exist when the research contains a range of triangulatory devices in one investigation, as in this study.

Denzin (1988) outline four types of triangulation:
* methodological triangulation - the use of multiple methods
* data triangulation - using several data sources
* theory triangulation - where more than one theoretical scheme is used in the interpretation of data
* investigator triangulation - where more than one observer is involved.

Within this study the first three triangulatory mechanisms were applied.

Methodological Triangulation

Methodological Triangulation can take different forms, but the underlying assumption is that the bias inherent in any particular methodology can be cancelled out by the use of a number of methods. Whilst this aspect is considered by many as problematic, methodological triangulation is thought to provide better evidence for researchers to construct more meaningful interpretations (Mathison, 1988).

'Within method' triangulation involves cross checking for internal consistency (Jick, 1979) or reliability. The WRCP questionnaire incorporated two different types of questions (open ended and fixed response) which both aimed to elicit information about reasons for leaving a programme and, therefore, provide a kind of within method triangulation, although Denzin (1978) suggests that this form of triangulation has limited value because only one method is being used.

'Between methods' triangulation was used in determining why students dropped out. Students self-reported reasons were gained through questionnaire responses and programme coordinators' perspectives from an analysis of Annual ('Formal') Programme Evaluation Reports. Between methods triangulation can be used to test the degree of external validity, as well as to reveal some unique variants which may otherwise have been neglected by a single method (after Jick, op cit.).

'Data Triangulation'

Data triangulation involving time, space and person, was used extensively in this study. Both qualitative and quantitative data on student drop out were collected in 1992 and again in 1993, reflecting the time dimension. Information was sought from a variety of different people - the

students, the staff and from Ministry of Education personnel. Data was gathered about drop out from a range of programmes at WRCP, incorporating different levels, subjects and geographically distant venues.

'Theory Triangulation'

In this case study a number of theoretical perspectives are used to interpret the findings. This arose more out of pragmatism than design - drop out theory is in its developmental stages and current theories of drop out were not developed in institutions at all similar to New Zealand polytechnics. No one particular theory appeared able to account for all the issues raised by this research and hence a variety of theoretical frameworks were applied at various times.

Summary

The incorporation of triangulation strategies into the design of the study endeavours to produce data which can be seen to be credible, which portray the reality of drop out statistics through the differing perspectives offered by students, staff and the institution. Whilst the application of these strategies does not always lead to a convergence of evidence, the levels and range of data produced allow interpretations to be developed which "illuminates and reveals the subject matter in a thickly contextualised manner" (Denzin, 1988, 512).

4.3 Summary

This chapter outlined the aims and specific questions which guided this research. The population of study was defined and a rationale for the selection of a case study approach has been offered.

A range of data gathering tools were employed and the perceptions of significant others assisted the researcher to gain a greater understanding of the data as it emerged. While some limitations were posed by the use of existing data sources, the range of methods employed appeared to overcome many of these concerns. The next two chapters will describe the results generated by the approach outlined in this section.

[1] The term 'traditional' here refers to face-to-face delivery mode in comparison with distance education provision.

[2] Previous polytechnic research had been conducted at the Open Polytechnic, a distance provider, and at Christchurch Polytechnic, both fairly large institutions.

[3] The Open Polytechnic (TOPNZ) and the Central Institute of Technology (CIT), both of Wellington, are notable exceptions.

[4] It is regrettable that 'drop out' conjures negative connotations for many, and may even appear perjorative, though no such judgement is intended. The researcher chose to adopt this term for the sake of clarity, it being broad enough to include the styles of leaving behaviour emphasised by this research whilst being in common usage amongst international writers on the topic, and not nearly so offensive as the term "wastage" with its economic connotations, adopted by many British and Australian authors. A full glossary of terms associated with drop out and other forms of leaving behaviour is provided at the front of this study.

[5] The Polytechnic's MIS could only deliver EFTS totals, as enrolments had their EFTS contributions calculated automatically by the course factors loaded into the programme enrolment system. The EFTS format was rejected by the researcher as a suitable data format, as it would have masked the part time/community withdrawal rate. To illustrate this point, for example, off campus community education enrolments totalled approximately 95 for the 1992 year but this equated to only 20 EFTS.

[6] Both these assumptions were later questioned by the researcher.

[7] Source: 'Education Statistics of New Zealand' 1990, 1991 and 1992.

[8] Background to the problems encountered with enrolment data from WRCP's computer management system, reasons for the adoption of Ministry statistics and limitations of this are described in Appendix 3.

[9] NZQA require nationally approved courses to operate standards based assessment as one of their course approval requirements.

[10] 'Formal' programmes are largely vocational. The term 'Formal' refers to category of particular significance in drop out and thus have been identified in this way to avoid confusion between the common usage of the term formal.

[11] "Success" being equated to the gaining of employment or accessing further training, in accordance with government (Skill New Zealand policies) described in Section 3.2.1.

CHAPTER 5:

RESULTS: THE INSTITUTION AND ITS ENVIRONMENT

Drop out is a complex phenomenon, according to the theorists. When a variety of types of data and data gathering techniques are used to try and reflect the many realities of this complexity, there is a tendency for fragmentation to occur, for the issues to become lost in the reporting back of the results from each method or data type. Thus, the case study results are arranged according to the contributions they make to particular themes, as suggested by the research questions.

Stake (1980, b) recommends that researchers make themselves familiar with the interests and concerns of the intended audience. As a member of WRCP's directorate, the researcher in this study was very familiar with the Polytechnic's activities and operations. However, the literature review indicated that specific situational variables, related to both the institution and the environment, were significant factors influencing drop out, especially for part time and commuting students. Thus, a review of the institution and the environment was undertaken using archived information and that available from WRCP personnel.

This chapter describes Wanganui Regional Community Polytechnic's (WRCP) activities, it's administrative structure, and the political circumstances in which it operates, in order to provide a situational context for the study of drop out. In particular, this section seeks to ascertain how recent changes in the funding of tertiary education have impacted on the costs of studying for WRCP students. The Polytechnic's student profile is developed to provide a comparison with the profile of drop outs. To reduce the ambiguity which is frequently associated with definitions in drop out studies, aspects of Polytechnic policies related to student selection and withdrawal are highlighted.

5.1   The Institution: A Current Picture

One of New Zealand's original Community Colleges, WRCP's name emphasises the commitment expressed in its charter (WRCP, 1991, b) to the cultural and economic development of the Wanganui region and its communities. WRCP's stated aim is to provide individuals and groups of people with access to lifelong learning opportunities. This philosophy has resulted in the Polytechnic offering a wide range of vocational and community programmes to students' who are based either at one of the seven campus sites in Wanganui city, or 'off campus' at various regional venues.

The Polytechnic manages approximately $10 million worth of publicly funded community assets, and employs nearly 400 tutorial staff, either in a part-time or full-time capacity.

5.1.1   Educational Provision at WRCP

Annual ('Formal') Programme Evaluation Report data

WRCP's Annual ('Formal') Programme Evaluation Report data indicated that 57 'Formal'[2] programmes were offered in 1993. 'Formal' programmes lead to recognised awards and these range from certificate to degree level in the areas of art, craft and design; bilingual/bicultural teacher training and Maori studies; agriculture and horticulture; tourism and catering; management and computing; information systems; special needs education; social services and technical trades (Appendix 11a lists the certificated programmes offered).

These largely vocationally oriented programmes entail one to four years of full-time study, although many can be completed over a longer period on a part-time basis because of the modular[3] nature of course delivery which is offered at WRCP. Students can choose as many modules as they want or have time for (although in practice there appear to be timetabling limitations) and over 734 modules are offered, many of which can be run 'off campus' in regional locations.

Increases in the range of 'Formal' programmes offered between 1986 and 1993 included a wider span of subject fields as well as increased length and levels of programme, as indicated by Figure 5.1. These changes in the nature of programmes offered were associated with changes in the staff, not only in numbers but also in the nature of their skills and background experiences (Coutts, 1992).

FIGURE 5.1

TYPES OF QUALIFICATIONS OFFERED 1986-1995

Source: WRCP (1993, a) The Polytechnic and Your Community, Wanganui.
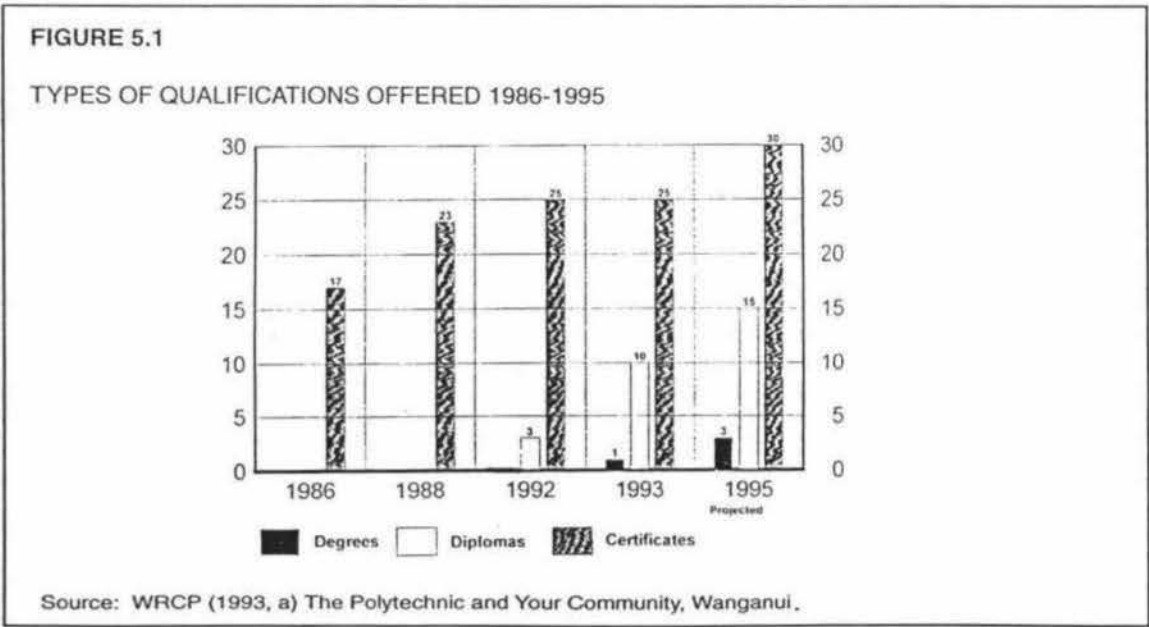
Community education programme brochures indicate that community courses are run 'on demand' with their subject matter being determined by local needs and interests. A wide variety of Community education activities, mainly short courses and seminars, are offered throughout the region, which extends from Patea to Ohakune, from Waiouru to Bulls and includes the city of Wanganui and the townships of Raetihi, Taihape, Hunterville, Marton and Waverley. In any year, between 85 and 95 off campus courses, ranging from 3 to 120 hours in duration, are offered, attracting approximately 950 individual enrolments (Appendix 11b indicates community programmes run by WRCP).

WRCP's Charter[4] outlines its commitment to ensure that the programmes and educational environment provided are responsive to the changing needs of students, society and the workplace in the context of the values of responsiveness, purposefulness, caring, concern for equity and awareness and sensitivity to mana Maori, which underpin its activities. The Charter states that the Polytechnic seeks to provide students with an education which meets their needs for knowledge, understanding and intellectual development, challenging their potential "... while respecting their dignity, rights, individuality and cultural background" (WRCP, 1991, b, 4). This vision has been translated into the catch-phrase "Quality and Caring". According to Deal, (1987, p479-481) slogans like this summarise deep seated core values, focusing the staff on aspects of the Polytechnic's philosophy which management consider essential in maintaining a competitive advantage as providers of quality learning experiences.

As stated in the WRCP's Quality System document . (WRCP, 1994, b) the Polytechnic has adopted a total quality management (TQM) system, seeking continuous improvement in the programmes and services offered in order to better meet the needs of its students. Programme evaluation reports, a major data source for this study, are presented annually to the Polytechnic's Academic Board and form a mechanism to channel student and staff feedback to policy makers.

5.1.2   Organisational Structure

Administration Documents

The implementation of curricular decisions is influenced by the way an educational institution is organised. The need for effective communication and collaboration, when Polytechnic activities are spread across seven campus sites, resulted in the adoption of a flat administrative structure centred around subject and service teams, (Coutts, 1992).

The 1993 annual report (WRCP, 1994, a) showed 10 subject schools - Rangahaua (Maori Studies); Agriculture and Horticulture; Design; Fine & Applied Arts; Community & Health; New

Directions in Education; Information Systems; Management; Applied Technology & Trades; and Catering & Hospitality. Each Head of School (HOS) is responsible for the administration of a cluster of subject related programmes, providing oversight of all aspects of quality educational delivery, including curriculum, staff, students, finance, equipment, and facilities.

Decisions affecting the management of the institution are made by the management team (comprising heads of schools, service managers and WRCP directors) or the Directorate, depending on their nature. The Quality System document (op. cit.) indicates that these decisions are heavily influenced by stakeholders, (government), feedback from advisory groups (industry) and students (through the Students' Association, programme evaluations, and participation in Polytechnic committees such as advisory groups, Council and the Academic Board).

5.1.3   Policies

Administration Documents

Tinto (1975) criticised many previous researchers for 'lumping together' forms of leaving behaviour which were different in nature, citing voluntary drop out and institution-initiated withdrawal as one particularly important distinction. When a student was considered 'enroled' was also important in establishing the meaning of drop out rates across institutions, as many universities had in place systems which allowed provisional enrolment, a process by which students withdrawing during this period were not recorded officially as drop outs. Some previous drop out studies also suggested correlations between assessment and leave schedules and drop out. Thus, the literature review established the importance of clearly outlining specific institutional policies as a very important part of the context of any drop out study.

The Polytechnic's Quality System document (op cit.) gave an overview of its intentions in relation to student entry, student guidance and support systems and student assessment, all of which appeared to be important influences on the participation and continuation of students. The Polytechnic's General Academic statute and policy manual contained more specific information in relation to, for example, guidelines for institution-initiated dismissal and refunding policies.

(a)   Student Entry

Entry requirements were found to differ according to the nature of the course, and these are related both to WRCP's capacity to provide staff and resources (limitations in class sizes occurred because of lack of specialised equipment or for safety reasons, for example) and to

the potential ability of the applicants to meet the standard of achievement expected by the end of the programme. 'Formal' programmes leading to recognised awards or qualifications required the completion of an official application form, followed by selection procedures as specified in individual programme brochures. Most 'Formal' programmes had specific entry criteria, often citing minimum academic standards. Many also noted desirable skills or attitudes and these appeared to be assessed during interviews and/or through some other selection process (eg. presentation of portfolio of work in the Fine Art and Design schools).

The Quality System document notes that community education programmes do not normally have assessment requirements and few have entry requirements, although many programmes targeted a particular audience in terms of level (eg. 'introductory' or 'advanced') as well as subject area (eg. 'Horticulture for the Home Gardener'). Most community classes appear to accept students on a first paid, first on the course basis, until the maximum roll is reached. Economics play an important part in the process of student entry onto programmes - courses of all types are advertised as running, subject to a minimum number of enrolments.

All courses have fees, which Council minutes show are set annually for the following year after considering the cost of provision and government subsidies. Another requirement for acceptance onto a programme was that the student either had paid the programme fees or authorised a student loan to cover these costs. From this point, the student is considered enroled, the student's progress becomes of concern to WRCP and the student becomes a potential drop out.

(b)   Student Guidance and Support

The Polytechnic's Quality System document (op cit.) outlines a range of services which are available free to enroled students, including advice on career opportunities, learning support and the usual health services. All course enquirers are offered information on available financial assistance, including scholarships, hardship and budgeting advice and eligibility for any government support. Other support services, such as childcare and accommodation are on a 'user pays' basis.

(c)   Assessment

As noted previously, many community courses are not assessed but each 'Formal' programme has in place a system to ascertain the educational progression of students. There was no overall Polytechnic assessment timetable, as is often the case in universities and other educational institutions which rely heavily on examination forms of assessment. Standards based assessment (either achievement or competency based) is a WRCP requirement for

programmes over which it has control, although national programmes set their own assessment requirements which must be implemented. The Polytechnic's academic regulations and policies on the rights and responsibilities of staff and students establish that students must be informed of the requirements of assessment to be undertaken at the beginning of a programme or module. Failure to meet the assessment requirements for a course of study may mean that the student cannot progress to a subsequent year of a programme. However, 'resit' opportunities (available in some schools) and the modularisation of programmes mean that, in practice, this is rare and students commonly repeat 'trailing' subjects in tandem with more advanced modules, heads of schools report. However, how many students decide not to return because they have not 'made the grade' may be revealed through the results of the student questionnaire which sought drop out students' reasons for leaving.

(d)   Polytechnic Initiated Withdrawal

Failure to meet academic requirements or to observe the Polytechnic's regulations can lead to dismissal from a programme, according to WRCP's General Academic statute. However, the annual report of complaints (part of the academic director's annual report to council) and the minutes of the polytechnic's arbitration committee, which deals with appeals, seem to suggest that institution-initiated withdrawal, for either academic or disciplinary reasons, is exceedingly rare.

(e)   Student Withdrawal and Refund Policies

Students wishing to withdraw from WRCP programmes are required to complete a form for both the purposes of stopping payment on any student allowances or other forms of support (eg. ACC payments towards training) and also to receive any refund to which they are entitled. The Polytechnic's refund policy allows a full refund for any student who withdraws seven days prior to the programme commencement and before the first day of the fifth week. A half refund is allowed if withdrawal is between the fifth and eleventh week but nothing is repaid thereafter unless there are exceptional circumstances.

(f)   Vacation Schedules

Most 'Community and General' courses appear to run termly (there are three terms in a polytechnic year, each term separated by a two week holiday break) whereas 'Formal' programmes run on a two-semester model. The midyear semester break is the only mandatory Polytechnic-wide common vacation. However, the general policy apparent from management team minutes appears to be to synchronise with primary school holidays wherever possible, in order to avoid childcare problems for those students with domestic responsibilities.

5.2 Student Population

The purpose of establishing the population of participating students was twofold - first, to give an idea of the extent of drop out by allowing a comparison of the numbers who leave with those originally enroled and secondly, to determine whether the drop out population was representative of the larger student group from which it originated, or whether there were certain groups who had a greater propensity to drop out. The information on the student population was derived from a summary of WRCP enrolment data provided by the Ministry of Education and supplemented by archived information from WRCP (largely promotional material, annual reports and enrolment data).

5.2.1   Part time and Full time Students

Administration Documents and Member Checks

Information developed for the Ministry of Education indicated that WRCP is the fifth smallest of 25 polytechnics with a current student population of less than 1,000 EFTS, although this translates to some 5,000[5] enrolments when all the non-Ministry funded learning activities are taken into account. Annual reports suggest that the "student body" is not a readily identifiable group, apart from the 600 or so (in 1993) students who were enroled full-time, as by far the greatest proportion of students at WRCP are either part-timers, or those attending short community education programmes, who live and work in the local community (Table 5.1).

TABLE 5.1

PARTICIPATION BY NATURE OF ENROLMENT (FULL AND PART TIME) AND TYPE OF PROGRAMMES AT WRCP: SUMMARY OF RECORDS ON STUDENT FILE

	1992			1993		
STUDENTS ENROLMENT STATUS	PT	FT	TOTAL	PT	FT	TOTAL
Formal	452	587	1039	322	662	984
Community & General	2478	50	2528	1622	117	1739
Finished before 30.7.93	-	-	-	576	48	624
SUB TOTAL	2930	637	3567	2520	827	3347
Status Not Known	-	-	-	-	-	15
Total Records on File	2930	637	3567	2520	827	3362

Source: WRCP enrolment data (at 31 July annually)
　　　　　FT = full time　　　　　PT = part time

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a)   Part Time

The existing economic situation, coupled with an aging population, would appear to have created an increased pool of potential part time participants, yet part time participation dropped between 1992 and 1993 (Table 5.1). Declining participation rates for part timers appear to have affected both 'Community & General' and 'Formal' programmes at WRCP.

The decrease in part time participation in "Formal" programmes suggests a link with declining economic conditions and employer investment in staff training. The fact that this drop off in part time enrolments in 'Formal' education was part of a national trend across the polytechnic sector (Dresmanis, 1993) would seem to support this view.

Increased costs associated with government education reforms' may have created financial barriers for part timers on community programmes.

The overall decline of part time enrolments was of particular concern to Heads of Schools because it appears that many students use part time programmes as a stepping stone, moving into further training at a higher level, or possibly even making a commitment to full time study, as confidence grows.

b) Full Time

In contrast, the number of full time students in all types of programmes, was found to have increased significantly (by around 30%) between 1992 and 1993 (Table 5.1). The increasing rate of full time participation was thought by Heads of Schools to be a consequence of the unemployment situation[6] in the region and of changes to government fees and allowances policies, which favour the full time student.

5.2.2   Pattern of Growth

Administration Documents

The increase in the number of EFTS experienced across the whole tertiary education sector (Figure 3.2, page 65) was reflected locally at WRCP (Table 5.2) which grew rapidly from 618 MOE EFTS[7] in 1991 to 741 in 1992 and 843 in 1993. While the overall trend is for growth, the pattern of growth was not even, as was noted previously and illustrated by Table 5.3. Full time participation appears to be increasing (Table 5.1), following a national trend. Part-time enrolments have shown a trend to decrease over the polytechnic sector (Ministry of Education, 1992, a), and this has been reflected locally at WRCP (Table 5.1).

TABLE 5.2

A COMPARISON OF MOE EFTS INCREASES (1991-1994) AND ASSOCIATED FUNDING GRANTS

Year	1991	1992	1993	Est 1994	Total
Growth EFTS	618	+20% 741	+14% 843	+10% 930	+51% growth
Funding Grants	$5,670,000	$5,728,312	$6,446,696	$6,965,572	+23%
Funding per EFTS (reduction)	$9,175	$7,731 -16%	$7,647 -1%	$7,490 -2%	-18% reduction in funding per EFTS
Reduction in costs	$8,975	$8,775 -2%	$8,233 -6%	$8,106 -2%	-10% Efficiency Savings

Source: WRCP Annual Reports 1991, 1992, 1993.

Despite changes in the funding structure which increased fees and reduced the number of community programmes able to be run by polytechnics, growth in Community education participation has continued across the polytechnic sector since 1990 (Table 3.2, page 67). The absence of institution-specific data for 'Community and General' education in 1990 precludes any real analysis of the impact of these changes on participation although it is likely that these changes contributed to the decrease in community enrolments evidenced at WRCP between 1989 and 1992[8]. It is also likely that these changes are continuing to affect community participation, possibly accounting for the drop out evidenced between 1992 and 1993, as shown in Table 5.3.

5.2.3   Student Participation by Type of Programme

Enrolment Data

Of the total number of students enroled at WRCP in 1992, almost one-third were enroled in 'Formal' programmes. Half of these students were studying full-time for one or two semesters and the rest were part-timers taking modules towards a 'Formal' qualification, as shown in Table 5.1.

There was a change in the ratio of full time to part time enrolments in 1993, with the number of full time students increasing to form two-thirds of those people studying in 'Formal' programmes.

The greatest proportion of students in both years were found to be enroled in 'Community and General' programmes, (largely short programmes meeting the interests and basic education needs of participants) and most were also part-time. However, a small proportion of the

'Community and General' category were full-time students who were attending TOP or similar government-subsidised retraining programmes (Table 5.3).

TABLE 5.3

NUMBER OF ENROLMENTS BY TYPE OF PROGRAMME AT WRCP

	'Formal' Education			Community Education	
Year	WRCP Students (FT & PT Total)	Full Time	Part Time	WRCP Students	Data Collected by Ministry of Education Census at 30 July References
1989	550 ¤	162 ¤	388 ¤	16,392 □	Education Statistics of NZ (1990, 74)
1990	593 =, ○	419 =, ○	174 =, ○	not available	Education Statistics of NZ (1993, 64)
1991	561 =	353 =	208 =	not available	Education Statistics of NZ (1993, 64)
1992	1,039 =	587 =	452 =	2,930	Education Statistics of NZ (1993, 88 and 1993 =, 64)
1993	984 =	662 =	322 =	2,535	Data Management Unit, Ministry of Education (Jan 6, 1994)

Note: Definitions of categories have not remained consistent between years:
    ¤   Block courses and full time/full year participants
    =   Attending formal programmes, both FT and PT attendance
    ○   The Ministry note that in 1990 a computerised enrolment system was introduced into polytechnics resulting in some disruption to data collection, so data for this year is not comparable with previous or subsequent years (Education Statistics of NZ, 1993, 64)
    □   "Part time", "Short Courses" and "Seminars" were the 1989 categories used to derive this data

5.2.4   Students' Origins

Member Checks and Informal Discussions

Approximately 300 students from out of town attend WRCP in any one year and these people are drawn from both a national and international catchment. Whilst this may appear a small number in comparison with the total WRCP population, most of these 'out of towners' are full time students and they form a large proportion of this category. New Zealand students come from as far afield as Kaikohe in the north and Ashburton in the south, although the majority come from the lower North Island.

In 1992 there were 40 overseas students at WRCP and, in 1993, there were 63, most studying in the graphic design area although a smaller number were enroled in business, catering, horticulture and glass programmes. Most of these students come from Malaysia but there are various countries represented each year by individual students.

5.2.5　　Student Accommodation and Transport

Member Checks and Informal Discussions

Most "out of towners" move to Wanganui for the academic year (February to November), a few staying in the Polytechnic's student flats (which currently house 24 students) but most either living in local rental accommodation or boarding with families registered through the Polytechnic's Accommodation Service. The rest of the full-time students and most of the part-timers are local students who commute from home to attend their lectures each day. Wanganui city is very small (population 40,920[9]) and mainly flat so that access to the Polytechnic is easy. Many students are able to walk or cycle although others bus or provide their own vehicular transport.

5.2.6　　Demographic Characteristics of Participants

The literature review indicated a divergence of opinion regarding the role which socio-demographic variables play in influencing participation and persistence in higher education. However Tinto (1982) argues that in culturally heterogeneous societies, one should expect the appeal of education to mirror that diversity. A comparison of the Polytechnic student profile with that of the local and national catchment populations, therefore, was conducted in order to ascertain WRCP was fulfilling its stated aim of providing life long educational opportunities to meet both local and national needs. In effect, this analysis formed a measure of the "adequacy of provision" (Foster, 1991, 5), indicating where groups may be evidencing barriers to participation. Gaps in the Polytechnic student profile may indicate groups "at risk" of dropping out because according to Tinto (1982), drop out and persistence are both reflections of the functioning of the higher education system. This view is congruent with that of Boshier (1973, 256) who regards drop out as "in some ways an extension of non-participation" noting that variables associated with one are associated with the other. He highlights the fact that both participation and drop out stem from an interaction of internal psychological and external environmental variables.

Although overall the WRCP population was not unlike its local and national catchment population, participation patterns differed according to programme category, revealing some differences in the age structure, gender balance and ethnicity.

The following section describes the WRCP student population and compares this with both the National and Wanganui urban area 1991 census data for gender, age distribution and ethnicity.

(a) Age

Enrolment Data

The population of WRCP was 'younger' than might have been expected from either the Wanganui or New Zealand population profile. A larger proportion of the students were found to be in the under 30 age category and in particular, there was a much larger proportion of students aged 19 and under, as Table 5.4 shows. Conversely the 40+ age group attracted a lower than anticipated number of students to enrol compared with the representation of this group in the local community, which in Wanganui is higher than the national average (Wanganui is apparently seen as an attractive retirement city). Data provided by the Ministry of Education's Data Management & Analysis Section (unpublished, 1994) indicated that the majority of mature (40+) participants were found to be enroled part time in 'Community and General' programmes (Appendix 12)[10].

Part-time participation was greatest for students under 17 or over 40, although there was a good representation of part-timers in all age categories, as shown in Appendix 13 a/b. In contrast, full-timers were consistently found to be aged between 18 and 24 - a substantial increase in the actual numbers of these younger students was recorded in 1993.

Between the two years, an overall increase in the proportion of all (both full time and part time) 'under 30' participants was noted (from 1794 students in 1992 to 1925 in 1993 as shown in Table 5.4). This was the result of both increased numbers of young people participating, (particularly as full time students), combined with declining numbers of mature participants, both men and women, across all types of programmes: a lot of the apparent drop in mature participation appeared to be associated with decreasing part-time enrolments. (Appendix 13 a/b).

Annual ('Formal') Programme Evaluation Report Data

Unfortunately age profiles for each programme had not been collected prior to 1993, so there was no basis of comparison between years from this source. However, data provided by the Ministry of Education for 'Formal' programmes (Appendix 12) suggested that a greater proportion of participants in 'Formal' programmes are aged under 30. Programme Report Data available for 1993 supported the suggestion that 'Formal' programmes have a higher proportion of younger full time students than expected from the overall Polytechnic population profile, (Table 5.4) though these findings may have been a product of the large (36%) proportion of participants for whom no age-related data were available.

TABLE 5.4

COMPARISON OF THE NATIONAL, WANGANUI, AND THE WRCP STUDENT POPULATION PROFILES BY AGE, ETHNICITY AND GENDER.

AGE	1992 FORMAL STUDENTS		1993 FORMAL STUDENTS		1992 TOTAL STUDENT POPULATION AT WRCP o		1993 TOTAL STUDENT POPULATION AT WRCP o		WANGANUI –		NEW ZEALAND –	
	#	%	#	%	#	%	#	%	#	%	#	%
<17	.	.	} 328	} 29.42%	642	16.19	693	20.70	} 3601	8.68	} 284998	8.30
18-19	.	.	}	}	387	10.86	408	12.13	}		}	
20-24	.	.	} 260	} 22.36%	484	12.87	460	13.74	} 5677	13.63	} 643447	16.80
25-29	.	.	}	}	371	10.40	368	10.94	}		}	
30-34	.	.	} 93	} 8.32%	437	12.26	343	10.26	} 5717	12.36	} 424086	12.36
35-39	.	.	}	}	383	10.73	302	9.02	}		}	
>40	.	.	46	4.11%	948	26.58	827	24.71	16134	39.43	1243360	36.17
Unknown	.	.	400	36.78%								
ETHNICITY												
European					2378	66.67	2272	67.88	33087	80.86	2658738	77.40
NZ Maori	184	23.56	259	23.17	478	13.40	561	16.76	6685	16.34	427717	12.46
Pacific Islander	6	0.77	6	0.53	17	0.48	18	0.54	529	1.29	159963	4.68
Other (Asian)					393	12.04	306	10.69	416	1.00	99294	2.89
Unknown					301	8.44	190	5.68	207	.05	28116	0.80
GENDER												
Men	369	47.25	417	37.30%	1261	36.07	1136	33.91	19440	47.51	1683959	49.29
Women	412	52.76	701	62.70%	2316	64.90	2212	66.09	21480	52.49	1741899	50.71
TOTAL	781	100	1118	100	3567	100	3347	100	40920	100	3434949	100

o   Source: WRCP enrolment data collected by Ministry of Education census at 31 July annually

–   Source: 1991 Census of Population and Dwellings - Regional Summary (1992), Wellington, Department of Statistics

Actual numbers category

%   Percentage of total population by category

(b)   Ethnicity

Enrolment Data

The ethnicity of the Polytechnic's student population was not dissimilar from the local population in most categories, with the exception of the minority groups, but this was not surprising considering the relatively low numbers of out of towners attending WRCP. The Wanganui region has a higher proportion of Maori (Table 5.4) compared to the national population, and this is reflected in the Polytechnic student population profile, particularly in 1993. While the greatest percentage of Maori students (74.27% in 1992 and 62.57% in 1993) were found to be enroled part-time, (tables a/b Appendix 13) representing one-eighth of all part-timers, a comparatively high proportion (on average just over one-fifth) of all full-timers were Maori. One of the senior managers suggested that this may have been because TOP programmes are included in the 'full time' student count.

A higher proportion of Asian and 'other' ethnic groups is evidenced at the Polytechnic than might have been expected and as a consequence the proportion of Europeans in the population is less. This was considered by heads of schools to be the result of active overseas marketing by WRCP for full cost recovery students, many of whom were from Asian countries. Lower participation was observed for Polynesians, although the very small local population (approximately 500) may have been a factor in this.

Annual ('Formal') Programme Evaluation Report Data

A greater proportion of Maori, but about the same proportion of Pacific Islanders, participate in 'Formal' programmes of study than might have been expected from overall participation rates across the Polytechnic. Most of these students were enroled in full time study (Table 5.4).

(c)   Gender

Enrolment Data

There were more women students than might have been expected from either the Wanganui or New Zealand demographic profile (Table 5.4). This is a common phenomenon across the tertiary sector in New Zealand according to Dresmanis (1993). His analysis of students by sector and gender over a two year period (1992-1993) showed, on average, a 53% participation rate for women enroled in 'Formal' programmes of study at New Zealand universities, polytechnics and colleges of education.

Higher participation rates of women in both full and part-time study were observed, although the greatest difference was noted in the part-time category where more than twice as many women as men had enroled over the period of the study, (tables a/b Appendix 13).

Annual ('Formal') Programme Evaluation Report Data

This source indicated the proportions of women and men participating in 'Formal' programmes in 1992 were very near those found in the Wanganui community. However, women formed a smaller proportion of the participants on 'Formal' programmes than might have been expected from the Polytechnic-wide participation data (Table 5.4). Women's participation in 'Formal' programmes increased in 1993, more nearly reflecting their participation rates across the whole Polytechnic. Most of the women (73.04%) were enroled as full time students in 1993, but the breakdown by nature of attendance was not available for 1992 (Appendix 14).

d)   Disability

Enrolment Data

There was no information available from this source about students identifying themselves as having a special learning need or disability.

Annual ('Formal') Programme Evaluation Report Data

It seemed from 1993 data, that these students were more likely to be enroled as part timers but there was no basis of comparison across the whole Polytechnic. However, it was interesting to note (Appendix 14) that in terms of numbers, participation in 'Formal' programmes quadrupled between 1992 and 1993, for this group.

Summary

Thus, while the overall Polytechnic's student population does display some differences from the groups from which it draws there was remarkable consistency evident over the two years of the study in relation to its catchment populations. 'Formal' programmes had a markedly different participation profile however, with a higher proportion of younger people and Maori, but fewer women than might have been expected from the overall student population.

5.3 Historical and Political Context

The effects which changes to the funding of tertiary education had on the polytechnic sector were explored as part of the literature review. It was established that these changes had direct effects on student participation and persistence through increases to the costs of study and reductions in the level of financial support available to students. Legislative changes to the way in which polytechnics operate, changes to their administration and activities, were also thought to have indirect effects on student drop out.

Analysis of archived information, including annual reports, council minutes, information for the Ministry of Education, promotional material and a review of management restructuring at WRCP, (Coutts, 1992) were data sources which were used to develop an understanding of how these changes had impacted on WRCP as an institution and on its students.

5.3.1   Background

Administration Documents and Member Checks

When it was established in 1984, WRCP was structured in a similar way to its parent Technical College (now Wanganui City College), with two subject department heads (secretarial/management and technical/arts/general) reporting to the Director who coordinated overall activities and performed the general management tasks for the 12 full-time equivalent (FTE) staff and 200 students. The Polytechnic grew rapidly, doubling the student intake and also increasing in complexity, so that, by 1990, there were 46 FTE staff and five departments in which a degree of specialisation had occurred: Arts, General Studies, Maori Studies, Trades, and Business. A major factor in this growth was government provision of funding for 'transition to work'[11] courses. By 1986/87 one-half of the class contact hours at WRCP were in this area, resulting in radical changes to the Polytechnic's student population as transition to work programmes increased the representation of women, Maori and young people within the Polytechnic student community. Organisational structure is known to be influenced by internal factors such as increased size, increased product diversification (programme range and levels) and consequential changes to staffing characteristics. Thus, as the number of students grew, the range and level of courses able to be offered also increased. The span of control of heads of departments became complex enough to justify a middle management layer and so course supervisors were put in place to coordinate clusters of programmes.

5.3.2   The Administrative Structure Over the Period of Study

Administration Documents and Member Checks

Problems resulting from the implementation of Learning for Life policies (New Zealand Government, 1989, a), first recorded in Council minutes early in 1989, led to a restructuring of the Polytechnic administration. The hierarchical departmental structure was replaced by the flat matrix structure which was described previously. Devolvement of authority, responsibility and accountability was envisaged by these changes which aimed to improve communication and coordination, according to Coutts, (1992). She maintains that financial liquidity problems experienced by small polytechnics under bulk funding were the impetus for restructuring which was implemented during 1990 in all areas except for the arts department. The Arts department was later split into two smaller schools - 'Design', and 'Fine & Applied Arts' - with the new Head of School taking up duties early in 1993.

The school/service matrix is the structure which prevailed over the two years (1992-1993) of the study of student drop out at WRCP. However, over the latter part of this period, the impact of a number of government policy changes, including the introduction of Study Right and the industry skills training strategy, (referred to in Chapter 3) combined with a down turn in trade and land based programmes, (Coutts, 1992) resulted in an uneven growth pattern across the schools. Questions about the viability of some schools, while others claimed scarcity of resources to meet burgeoning student demand, prompted the Management Team to consider further administrative restructuring late in 1993. Although no changes were made prior to the completion of the study, the concerns which prompted this consideration may have had effects on the administration and educational delivery in schools which affected drop out. Whilst it is impossible to know the extent to which organisational and programme administration changes affected the experiences of individual students, the literature review suggests that such institutional factors must be acknowledged as possible influences on student drop out from WRCP.

5.3.3   Institutional Funding and Student Financial Support

Administration Documents and Member Checks

Whilst there has been an increase of 51% of government funded equivalent full time students at WRCP between 1991 and 1994, the total government funding in the same period was reduced from $9,175 per EFTS in 1991 to $7,647 in 1993 with a further reduction anticipated in 1994 to $7,490, a drop of $157 per student. Overall this shows a decrease of $1,725 per EFTS, or 18% reduction in funding since 1991 as shown in Table 5.2 (page 117).

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In simple terms this means that each year WRCP has received less funding per EFTS to cover the costs of programmes and the development of the Polytechnic, as illustrated in Figure 5.2.

FIGURE 5.2

PERCENTAGE COMPARISONS OF M.O.E. FUNDING
AND STUDENT GROWTH PATTERNS 1991-1994
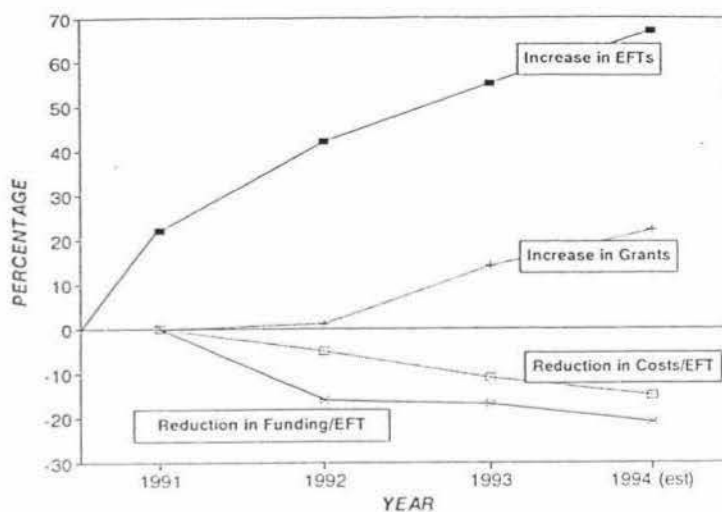
Source: WRCP (1993, c) Information for the Ministry of Education, Wanganui.

WRCP absorbed a further reduction in funding in 1993 and held its fees at the 1992 level so that over the second year of study, the financial burden for students would have been comparable. However, to do this, the Chief Executive indicated that all staff had been required to make "efficiencies" in the operation of their areas[12]. While the effects on the quality of education delivery and student support are not quantifiable, they need to be borne in mind when drop out for the 1993 period is discussed.

There were no changes to levels of student financial support or to the student loan scheme over the two year period of the study.

5.4 Conclusion

This chapter has described the institutional and environmental context for the study of drop out from WRCP. Changes in the Polytechnics' external operating environment, particularly in relation to funding and internal pressures resulting from increases in the size of the student population and in the number and diversity of programmes and staff are institutional factors known to have both direct and indirect consequences on students' decisions to participate or to withdraw from courses. The next chapter outlines the information which was gathered from WRCP about who withdrew, from what programmes, when and why, over the same period of change.

[1] At an average service cost of $8,700 per EFTS (Equivalent Full Time Student)

[2] 'Formal' programmes are largely vocational. The term 'Formal' refers to category of particular significance in drop out and thus have been identified in this way to avoid confusion between the common usage of the term formal.

[3] A module is a unit of learning built around specific measurable competencies. This approach was adopted by the Polytechnic in 1989 in response to Government calls for tertiary education to become more flexible and also to enhance cost effectiveness by rationalising small numbers on common courses (Coutts, 1991)

[4] The Education Amendment Act, 1990, requires every tertiary institution to produce a Charter and Strategic Plan in order to increase public accountability.

[5] The total enrolments figure includes prison education, College for Seniors, Conservation Corps and Link activities for secondary students, which were not included in this study of student withdrawal, and multiple enrolments (where a student has joined several short programmes during the year) which are adjusted for in subsequent calculations.

[6] Wanganui had an 11.1% unemployment rate in 1991 according to the Health Status Review, (Unknown, 1992)

[7] The Ministry of Education (MOE) Equivalent Full Time Student figures are lower than the overall EFTS figures generated by the Polytechnic because the latter include LINK, TOP and prison education, financed through other sources.

[8] The very large drop off in community education participation between 1989 and 1990 has been attributed to changes in Ministry operational definitions and also to their reclassification of some courses (Ministry of Education, 1993, 64).

[9] Source: Department of Statistics (1992)

[10] 1993 estimates confirmed, at 54.05% this point, but these figures could not include the "finished before 30 July" data.

[11] A succession of specially funded transition education programmes were implemented by successive governments over the last decade (YPTP - Young Person's Training Programme; STEPS - School Leavers' Training and Employment Preparation Scheme; TAP - Training Assistance Programme; ACCESS, MACCESS - Maori ACCESS, and TOP - Training Opportunities Programme), forming a major growth area for the Polytechnic sector over this period.

[12] The WRCP Council Chairman indicated a fees increase in 1994 was inevitable.

CHAPTER 6:

RESULTS: THE EXTENT AND NATURE OF DROP OUT AT WANGANUI REGIONAL COMMUNITY POLYTECHNIC

This chapter describes the extent and nature of leaving behaviour identified at Wanganui Regional Community Polytechnic (WRCP) in the two year period 1992-1993. Refund data are compared with enrolment records to determine institutional withdrawal rates, and rates of withdrawal by type of attendance (full or part time study) and by the gender, age and ethnicity of students.

The drop rate is shown not to be fully represented by official withdrawals and some degree of attrition is revealed. In this study the term[1] 'drop out' refers to all students who leave their programme of study within a given year. Withdrawal describes the process by which a student (the withdrawer) officially leaves, having informed the institution that s/he no longer intends continuing study, whereas attrition describes the process whereby an enroled student ceases to attend classes, without officially notifying the polytechnic.

How drop out varies across the academic year, across schools and types of programmes is outlined and various interpretations are put forward by staff to explain these findings. Students' reasons for leaving the programme and their planned destinations are described and these are compared with the perceived reasons held by programme coordinators. Together these data provide a holistic picture of drop out from WRCP and they identify a number of significant issues.

6.1 Extent of Drop Out

Drop out needs to be viewed in the context of participation in order to develop meaningful interpretations. Withdrawal data generated from refund forms and annual programme evaluation reports are described and interpreted in the light of enrolment data outlined in Chapter 5. Because the Annual Evaluation Reports on 'Formal' programmes afforded an independent source of information about drop out, they were able to act as a useful triangulatory device when used in conjunction with enrolment and refund data. Member checks with school managers and administration staff were used to clarify the interpretations of data from these reports.

6.1.1   Institutional Withdrawal Rates

Refund Data

Withdrawal rates established at WRCP through official withdrawal procedures indicated that a total of 169 students officially withdrew out of the 3567 enrolments[2] recorded for 1992, giving an overall drop out rate of 4.74%,[2] as shown in Table 6.1. In 1993 a similar pattern emerged with 163 out of 3362[2] students officially withdrawing from their programme of study, producing an institutional withdrawal rate of 4.85%

TABLE 6.1

WITHDRAWAL BY NATURE OF ENROLMENT AND TYPE OF PROGRAMME AT WANGANUI REGIONAL COMMUNITY POLYTECHNIC

STUDENTS ENROLMENT STATUS	1992			1993		
	PT	FT	TOTAL	PT	FT	TOTAL
Total Enrolment Records on File	2930	637	3567	2520	827	3362
Drop Outs (numbers of students leaving during the year)	138	31	169	110	53	163
Drop Outs (as a percentage of total enrolments by category)	4.7%	4.9%	4.7%	4.4%	6.4%	4.9%

Source: WRCP enrolment data collected by Ministry of Education census at 31 July annually
FT = full time
PT = part time

6.1.2   'Hidden Drop Out', Student Attrition and Revised Drop Out Rates

Annual ('Formal') Programme Evaluation Report Data

The drop out rate, however, is not fully reflected by official withdrawal statistics. A comparison of Annual ('Formal') Programme Evaluation Report data with Refund Data highlighted a discrepancy between drop out information derived from tutor registers of student attendance, and that indicated from the polytechnic's official student refund and withdrawal procedures, as shown in Appendix 15 (a/b). In 1992 there were 59 extra drop outs identified and a much higher number, 76, in 1993. The addition of 'hidden drop out' to the official drop out numbers provided by refund data enabled a revised drop out rate of 6.39% to be calculated for 1992 and 7.10% for 1993.

Member Checks

It was clarified by discussion with heads of schools that the additional leaving students identified would probably be full time participants. In only one school (Management) was this found not to be the case.

TOP programme leavers were found to be one source of 'hidden drop out' because accountabilities for these programmes were handled directly with the funder (ETSA) by the Polytechnic's External Contracts Manager. There were 15 TOP drop outs recorded in 1992 and 14 in 1993, so this did not account for the majority of 'hidden drop out'.

It was found that not all students who left programmes officially withdrew. Many merely ceased to attend classes (attrition), never officially informing the Polytechnic. The attrition rates for 1992 were estimated at 1.23% and for 1993 as 1.84%.

6.1.3   Summary

Not all students who left programmes were identified by official withdrawal statistics. By adding the number of TOP drop outs to the estimated numbers of students who left by attrition and adding these to official withdrawals, an idea of the true extent of drop out from the Polytechnic was developed. In both years the overall drop out rate appeared to be low. The accuracy of these figures may have been limited by the inability of WRCP systems to capture attrition from community programmes, and to differentiate between 'drop down' (partial withdrawal), 'stop out' (breaks in study), students transferring to other educational institutions and those withdrawing from studies altogether. Community education attrition rates would have had a tendency to increase the final figure, but drop down and stop out to decrease it.

6.2 Nature of Drop Out: Full Time and Part Time Withdrawal

6.2.1   Withdrawal by Nature of Attendance

Refund Data

Part timers formed a greater proportion of the total number of withdrawers, as shown by Figure 6.1. However, comparison with the WRCP population revealed that part timers actually had a similar or lower withdrawal rate than their full time counterparts. These data are shown in Table 6.1.

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FIGURE 6.1

WITHDRAWING STUDENTS AS A PERCENTAGE OF TOTAL ENROLMENTS 1992-1993
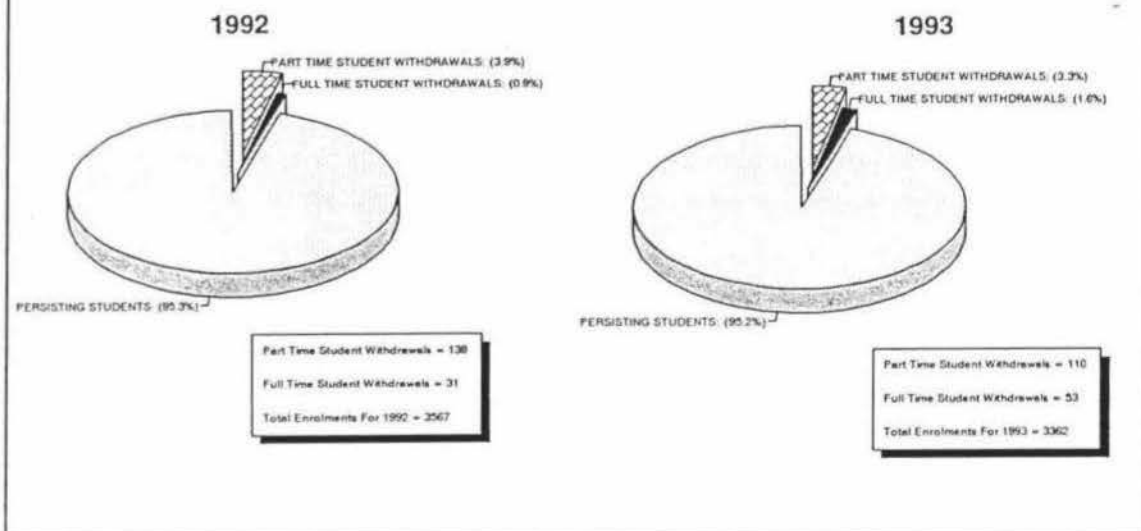
Thirty-one of the full-time students withdrew from their programme of study in 1992, although full-timers formed only a small proportion (17.86%) of the total withdrawing population, yielding a full time withdrawal rate of 4.9%. Part-time students made up the greatest percentage of the total student population (82.14%) but of these 138 left, yielding an annual part-time withdrawal rate of 4.7% for 1992. So although the part time withdrawal rate was slightly lower than that for full time students, the difference was negligible.

Although 1993 recorded a similar overall withdrawal rate (4.9%) some interesting differences were noted. Total enrolments for the year were down by about 6% but there was a 30% growth in the number of full-time students, yielding an overall growth rate of 14% on the preceding year's EFTS total (see Table 5.2). Full-timers comprised nearly one-quarter of the student population in 1993 and of these, 53 subsequently withdrew, yielding a higher full-time withdrawal rate at 6.4% than had been experienced the year previously. In contrast, only 110 of the part-time students officially left their polytechnic programmes before completion. This was 28 less than the year previously, producing a slightly reduced part-time withdrawal rate of 4.4% in 1993.

6.2.2 Summary

Although over both years greater numbers of part-time students withdrew, part-timers were found to have similar or lower drop out rates than their full-time counterparts.

6.3 Differences Between the Drop Out Rates of Different Types of Programmes

The literature review suggested that different types of programmes might experience different drop out rates. In this section drop out rates from 'Formal' programmes (leading to a recognised qualification) and individual programmes are examined.

6.3.1 Drop Out from 'Formal' Programmes

The drop out rate from 'Formal' programmes was higher than the overall Polytechnic drop out rate.

Annual ('Formal') Programme Evaluation Report Data

A total of 114 students left out of 781 enrolments in 'Formal' programmes, according to Annual Programme Evaluation Reports for 1992, giving an overall drop out rate of 14.6%. This was almost three times the official WRCP withdrawal rate for that year (4.7%), and twice the estimated overall drop out rate (6.4%). The following year the drop out rate from 'Formal' programmes had reduced to 12.6%, but this was still much higher than either the official WRCP withdrawal rate (4.9%), or the overall drop out rate (7.1%) for that year. Slightly more (136) students had left but this was out of an increased enrolment of 1,118, as shown in Table 6.2.

TABLE 6.2

'FORMAL' PROGRAMME DROP OUT COMPARED WITH OFFICIAL WITHDRAWAL RATES

Total Student Population				Students in 'Formal' Programmes			
Enrolments		Withdrawals		Enrolments		Drop Out	
1992 *	1993 *	1992 °	1993 °	1992 ∎	1993 ∎	1992 ∎	1993 ∎
#	#	# %	# %	#	#	# %	# %
3,667	3,347	169 4.7	163 4.9	781	1,118	114 14.6	136 12.6

Source:

* Figures based on 31 July statistics returned to the Ministry of Education
∎ Annual (Formal) Programme reports
° Refund application forms

6.3.2   Programme Withdrawal Rates

Annual ('Formal') Programme Evaluation Report Data

This source indicated 17 programmes exhibiting high drop out rates in 1992 and 24 in 1993, as illustrated in Appendix 16. High withdrawal rates were arbitrarily taken as 15% or more, being three times the Polytechnic average official withdrawal rate. A few programmes exhibited particularly high drop out rates (over 50%) but these were usually particularly small programmes where the two or three withdrawals made a big impact on programme numbers, or where programmes were modular and involved large numbers of part-time students.

Eight programmes demonstrated high drop out rates over both years of the study. There did not appear to be any relationship between high drop out and particular subject areas. While high drop out was evident across a range of levels, there did appear to be a greater proportion of TOP, foundation, and introductory level programmes amongst those exhibiting high drop out rates.

6.3.3   Summary

Drop out rates from 'Formal' programmes and 'introductory/foundation' level programmes were higher than the drop out rate evidenced across the Polytechnic generally.

6.4 Polytechnic Schools Have Different Drop Out Rates

Some drop out studies cited in the literature review (for example Smith, 1987) suggested that students in certain subject areas may be more likely to experience high drop out rates than others. At WRCP, programmes of like subject are clustered together in schools for administration purposes, as outlined in the previous chapter. Thus, an analysis of the withdrawal and attrition rates between schools was conducted in order to ascertain whether there were any differences.

6.4.1   Total Student Withdrawals by School

Annual ('Formal') Programme Evaluation Report Data

'Formal' programmes exhibiting high drop out (Appendix 16) appeared to be randomly spread across all schools of the polytechnic.

Refund Data

The refund form identified the programme/module which the student had withdrawn from, enabling drop outs for each school to be compared.

Three schools were found to have higher withdrawal rates than the others over both years of the study, as illustrated by Figure 6.2.

FIGURE 6.2

SCHOOL WITHDRAWALS AND SCHOOL SIZE (MOE EFTS)

1992

1993
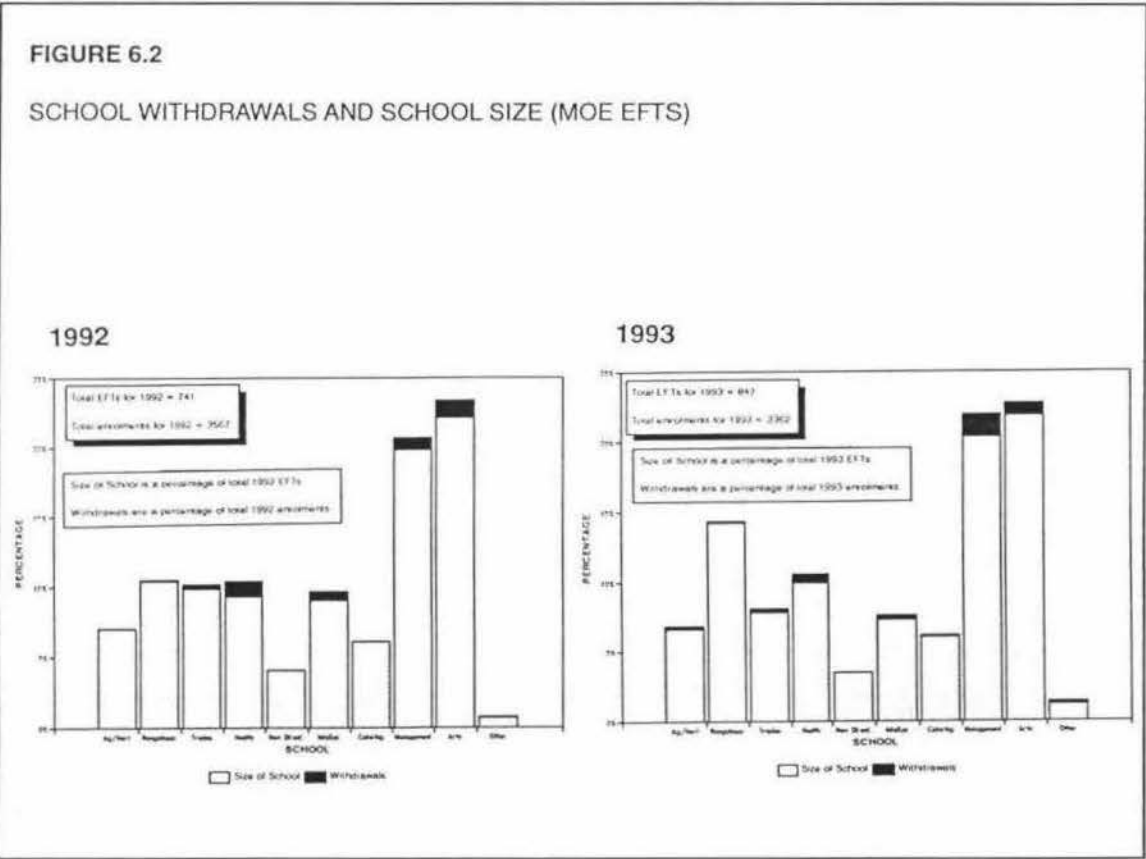
Many of the withdrawals in 1992 were from the Arts (46) and Management (32) areas, which was not surprising as these were the two largest schools with 164 and 147 EFTS respectively. However, nearly one-quarter of the leaving students (39) were found to have withdrawn from the Community & Health School, which was one of the smallest (69 EFTS) as shown in Table 6.3, placing this as the school with the second highest number of withdrawers. A school of a similar size (Information Systems - 67 EFTS) had only half as many (22) students officially withdraw in 1992, placing it fourth by number of withdrawals. All other schools experienced very low numbers withdrawing that year.

TABLE 6.3

STUDENT WITHDRAWAL BY SCHOOL SIZE IN MOE EFTS

School/Section	No. Official Withdrawals 1992	MOE EFTS 1992	No. Official Withdrawals 1993	MOE EFTS 1993
Agriculture/Horticulture	3	52	8	56
Catering/Hospitality	3	45	5	51
Community/Health	39	69	23	84
Design (formerly Arts Dept)	} 46	} 164	25	105
Fine Arts			7	79
Information Systems	22	67	13	61
Management	32	147	54	171
New Directions	2	30	3	29
Rangahaua	6	77	7	120
Summer School	-	12	-	11
Trades	12	73	10	66
Other (SD) (ARLA)	4	5	8	10
Off Campus	-	*	-	*
TOTALS	169	741	163	843

☐ EFTS = Equivalent full time student numbers
* Off Campus figures included in Schools' totals

Source: EFTS data from WRCP 1993 Annual Report

The schools exhibiting the biggest withdrawal figures in 1992 did so again in 1993, although many showed reductions in the actual numbers leaving. In 1993 the Arts Department was split and ran as two schools, each with their own administrative support, limiting direct comparability between years. The Fine & Applied Arts component evidenced only 7 withdrawals but Design had 25 giving a combined total of 32. This was a 30% decrease over the 1992 drop out total and it was particularly significant when considered in the context of a 13.8% overall percentage growth in EFTS. The schools of Community & Health and Information Systems also evidenced reduced drop out, with withdrawal numbers in the order of 40% lower than they had experienced in 1992. Community & Health lost 23 students, although analysis of the participation profile for the School revealed a 21.7% growth in EFTS and more full-time students (of whom only four left, the same as in 1992) but less part-timers than in the year preceding. The School of Information Systems evidenced a loss of only 13 students in 1993. In contrast the Management School, which had also grown (by some 17.9% from 147 to 171 EFTS), evidenced an even higher withdrawal (54) during this year, an increase of 69% over 1992 figures. The remaining schools continued to exhibit low official withdrawal rates.

6.4.2   Full-Time Withdrawals by School

Refund Data

Information Systems was shown to have the highest full time withdrawals in 1992 (nine), closely followed by Management (eight): together these two schools accounted for half of all full-time

withdrawals. Most other schools evidenced very low withdrawals, less than 10% of all of the official full time withdrawals. These data are tabled in Appendix 15 (a/b).

Again in 1993 most schools had very low full-time withdrawals except for the School of Design (accounting for one-fifth) and once again, the School of Management, which accounted for more than one-third of all full-timers withdrawing. However, there had been a 70% institution-wide increase in full-time student withdrawals between the years 1992 and 1993. Thus, in actual numbers, the drop out from the School of Management had doubled (from nine to eighteen) between years. The increases in withdrawal need to be viewed in the context of the increased participation rate for full-time students across the polytechnic in that year, but even so full time withdrawal rates had increased over this period (from 4.9% to 6.4% as shown in Table 6.1).

6.4.3   Part-Time Student Withdrawal by School

Refund Data

Polytechnic part-time withdrawal rates were very similar between 1992 (4.7%) and 1993 (4.4%), as noted previously (Section 6.2.1). Over this period the total numbers of part-time withdrawals dropped by about 20% but this was a reflection of the decrease (14%) in part-time participation. From evidencing the highest percentage of total part-time withdrawals in 1992, the combined Art category (School of Fine & Applied Arts and the School of Design) were shown to have substantially reduced part-time withdrawals (from 43 in 1992 to only 19 in 1993). The School of Community & Health also demonstrated a large decrease in part time withdrawals (35 in 1992 down to 19 in 1993).

In contrast the School of Management's part-time withdrawers increased to 35 in 1993, compared to 24 in 1992. This must be considered in the context of the large number of part-time enrolments in this School, however, (126 in 1993). Most other schools continued to evidence a small number of part-time withdrawers with little pattern evident.

6.4.4   School Attrition Rates

Annual ('Formal') Evaluation Report Data and Refund Data

The extent of school attrition was indicated by differences between drop out data evidenced through comparison of *Annual ('Formal') Evaluation Report Data* and *Refund Data*. Each head of school was consulted to clarify the interpretation of discrepancies between the two data sources. The total drop out picture for each school, a combination of both official figures, TOP withdrawals and attrition, reflects this input, illustrated by Figure 6.3 and summarised in Table 6.4 (full details in Appendix 15 a/b).

FIGURE 6.3

STUDENT WITHDRAWALS BY ATTRITION BY SCHOOL
AS PERCENTAGE OF TOTAL LEAVING STUDENTS
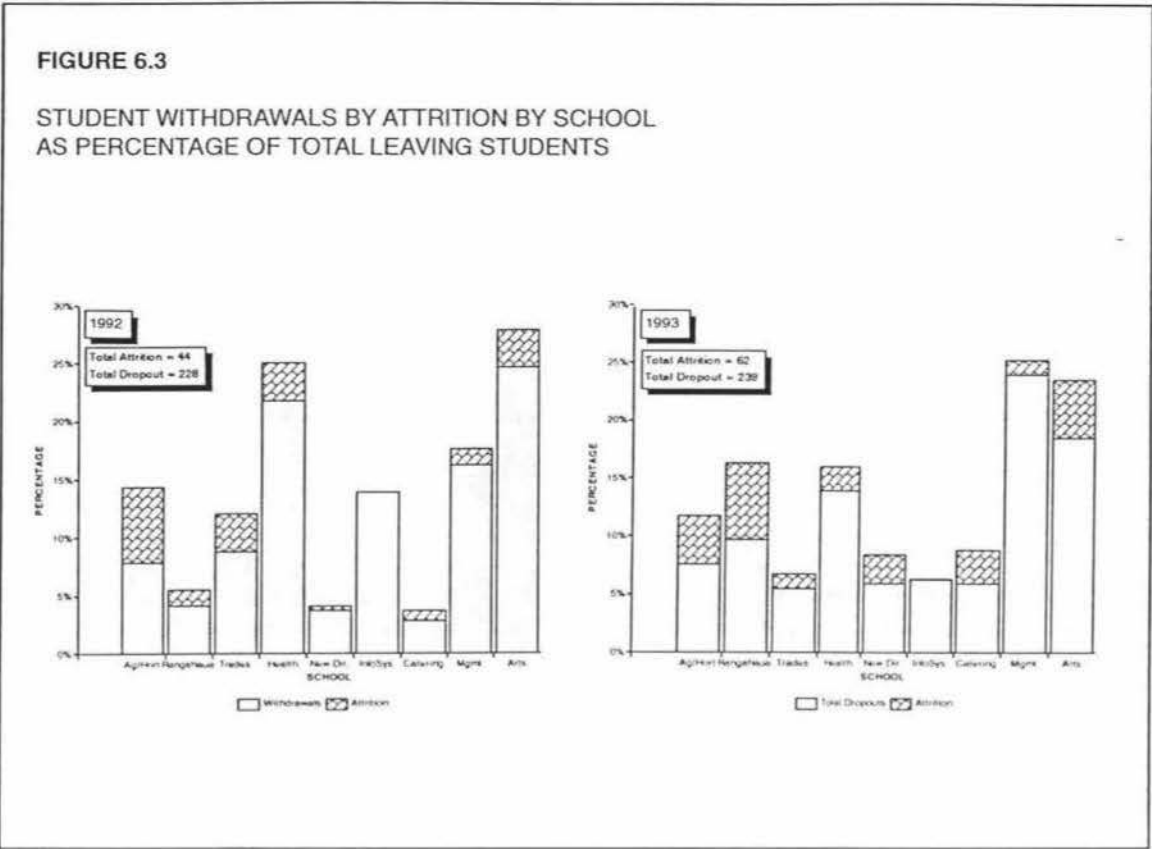
While the total drop out due to attrition was found to be relatively small when compared to the total number of enrolments, its impact was not evenly spread across schools, and there was no consistent pattern noted between the two years.

In 1992 several schools had no or little attrition (Maori Studies, Catering & Hospitality, New Directions in Education, Information Systems and Management). However, in some schools (Agriculture/Horticulture, and Arts) student loss due to attrition was relatively high.

When attrition and TOP drop out was added to official withdrawals to calculate revised drop out figures, Arts ended up with the highest revised drop out of all the schools. The School of Community & Health recorded the second highest drop out after TOP withdrawals and attrition attrition had been estimated. The largest loss through attrition was recorded by the School of Agriculture & Horticulture (14 students). However, this school evidenced small numbers of official withdrawals, giving a revised drop out total of 17 students, about 8% of the final WRCP figures. According to the Head of this School, only one full-time student left - the rest were all part-timers.

In 1993 drop out as a result of attrition appeared to have doubled that recorded the year previously. This was largely attributable to an alteration in the 1993 Annual 'Formal' Programme Evaluation format, which requested more specific information on withdrawing students including

TABLE 6.4

DROP OUT BY SCHOOL - A COMBINATION OF OFFICIAL AND TOP WITHDRAWAL, AND ATTRITION

School	1992					1993				
	Official Withdrawals #	Withdrawal according to programme reports	Attrition * from Formal Programmes	Total + Number of Drop Outs by School	School Drop Outs as % of Total Drop Out	Official Withdrawals #	Withdrawal according to programme reports	Attrition * from Formal Programmes	Total + Number of Drop Outs by School	School Drop Outs as % of Total Drop Out
Agriculture/ Horticulture	3	15	14	17	8%	8	12	10	18	8%
Maori Studies (Rangahaua)	6	6	3	9	4%	7	19	16	23	10%
Applied Technology & Trades	12	11	7	19	8%	10	10	3	13	6%
Community & Health	39	12	7	47	21%	23	18	5	33	14%
New Directions in Education	2	6	1	8	4%	3	14	6	14	6%
Information Systems	22	16	0	30	13%	13	6	0	15	6%
Catering & Hospitality	3	3	2	6	3%	5	11	7	14	6%
Management	32	35	3	35	15%	54	22	3	57	24%
Fine Arts	46	10	7	53	23%	7	14	12	19	8%
Design						25	10	0	25	11%
Other (Staff Development, ARLA)	4	0	0	4	1%	8	0	0	8	3%
TOTAL	169	114	44	228	100%	163	136	62	239	100%

* This attrition data is from formal programmes only. Community education attrition is not included in this table. The heads of each school were consulted about the interpretation of programme report figures for 1992, as this did not specify a breakdown of drop outs by nature of enrolment.

+ Note: TOP Withdrawals (15 in 1992 and 14 in 1993) included in this table.

detail about part-timers. As a result of follow up discussions with heads of schools, it appeared that most of the previous years' reports had only recorded information pertaining to full time enrolments. The new format provided data which was easier to verify and hence these figures appear to reveal a more 'accurate' rather than an increased attrition rate.

In 1993 all schools evidenced some drop out due to attrition except for the School of Information Systems and the School of Design, both of which had lower drop out figures on the Annual 'Formal' Programme Evaluation Reports than evidenced by refund applications, suggesting that students had 'dropped down' rather than totally withdrawn from their programmes of study (ie being 'in class' as far as the programme coordinator was concerned but recorded by central administration as a withdrawal because they had received a refund for one of their papers). Alternatively this discrepancy could have highlighted inaccuracies in student attendance registers, but clarification with the heads of schools confirmed that the first explanation was the correct one in both cases.

The highest attrition in 1993 was experienced by the School of Maori Studies (16 extra students left) followed by the School of Fine & Applied Arts (12 more), and the School of Agriculture/ Horticulture, (with 10 more).

Revised drop out calculations for 1993 placed Management as the school with the highest drop out numbers, the source of nearly one-quarter of all drop outs, twice as many as any other school. Management was followed by the Schools of Community & Health, Design, Maori Studies (Rangahaua), and Agriculture/Horticulture. The relatively high revised drop out figures for the Schools of Management, Maori Studies, and Design appeared consistent with the notion that there was a relationship between extent of drop out and school size (at 171, 120 and 105 EFTS respectively) as described in Section 6.4.1. However, for the second year running a smaller school, the School of Community & Health (84 EFTS) was shown to have a high revised drop out (the second highest in the polytechnic[3]). The School of Agriculture/Horticulture displayed a similar pattern to the year previously with a low rate of official withdrawals but high attrition evidenced from the annual programme reports. This was of particular note, when the small size of the school is considered (52 EFTS in 1992 and 56 in 1993).

6.4.5   Summary

Arts, Management and the Community & Health schools evidenced high official withdrawal over both years of the study. Management and Arts had a large EFTS count suggesting a relationship between participation and withdrawal. This idea was supported by the substantial reduction in drop outs from the Arts area following the split of the large department into two smaller schools. However, the school of Community & Health was one of the smallest schools.

Another small school, the school of Agriculture/Horticulture, whilst evidencing low official withdrawal, was found to have particularly high attrition over both years of the study.

The relatively high incidence of attrition noted in certain schools at WRCP should be of concern to the Polytechnic as the process of completing a withdrawal application was frequently the mechanism which facilitated supportive action (for example, where financial hardship is suggested), although the manager of the student services section commented that she hoped that tutors and school managers would have tried to assist the student prior to this point.

6.5 The Demographic Characteristics of Drop Outs

Official drop out data were disaggregated according to the age, ethnicity and gender of withdrawing students and compared with enrolment data to ascertain whether there were differing drop out patterns amongst these groups. These data were compared with that from 'Formal' programmes to ascertain whether a different drop out pattern existed from that developed across the Polytechnic generally. These comparisons, based on gender, ethnicity, age and disability are provided in the following section and illustrated in Table 6.5.

6.5.1 The Age Profile of Those Who Withdraw from WRCP Programmes Overall and 'Formal' Programmes

(a) Age Profiles of Withdrawers from WRCP Programmes

Refund Data

On average, a slightly greater proportion of official withdrawals were found to be from students aged 30 or more (Table 6.5). The age category which produced most of these withdrawals was the over 40 group though comparison with the high participation rate resulted in a withdrawal rate which was fairly similar (5.0% in 1992 and 5.1% in 1993) to the overall Polytechnic average. Most of the withdrawals in the 40 plus age group were from part-timers. By contrast, most of the full-time withdrawers were aged under 30 (80.6% of all full-time withdrawals in 1992 and 81.1% in 1993), as illustrated in Appendix 13 a/b .

TABLE 6.5

COMPARISON OF WANGANUI REGIONAL COMMUNITY POLYTECHNIC STUDENT POPULATION WITH THE POPULATION PROFILE OF FORMAL ENROLEES

	Total Student Population WRCP				Students in Formal Programmes WRCP			
	Enrolments*		Withdrawals°		Enrolments⊠		Withdrawals⊠	
	1992 n = 3,567	1993 n = 3,347	1992 n = 169	1993 n = 163	1992 n = 781	1993 n = 1,118	1992 n = 114	1993 n = 136
AGE								
<17	15.2%	20.7%	3.6%	1.8%	n/a)	) 29.2%	n/a)	) 41.2%
18-19	10.9%	12.1%	10.7%	12.9%	n/a)	)	n/a)	)
20-24	12.9%	13.7%	14.2%	23.9%	n/a)	) 22.2%	n/a)	) 20.6%
25-29	10.4%	10.9%	12.4%	14.1%	n/a)	)	n/a)	)
30-34	12.3%	10.3%	11.8%	11.0%	n/a)	) 8.3%	n/a)	) 8.1%
35-39	10.7%	9.0%	14.8%	10.4%	n/a)	)	n/a)	)
>40	26.6%	24.7%	27.8%	25.9%	n/a	4.1%	n/a	4.4%
Unknown	-	-	4.8%	-	n/a	36.6%	n/a	34.6%
GENDER								
Male	35.1%	33.9%	26.1%	29.4%	47.3%	37.8%	43.0%	46.0%
Female	64.9%	66.1%	74.0%	70.1%	52.8%	62.2%	57.0%	54.0%
DISABLED								
Disabled	n/a	n/a	n/a	n/a	2.1%	6.2%	0.9%	7.4%
ETHNICITY								
European	66.7%	67.9%	69.8%	75.5%	n/a	n/a	n/a	n/a
NZ Maori	13.4%	16.8%	5.3%	8.0%	23.6%	22.3%	14.0%	40.4%
Pacific Islander	0.5%	0.5%	0	0	0.8%	0.5%	1.8%	0.7%
Other (Asian)	11.0%	9.1%	13.0%	13.5%	n/a	n/a	n/a	n/a
Unknown	8.4%	5.9%	11.8%	3.0%	n/a	n/a	n/a	n/a

*   Figures based on 31 July statistics returned to the Ministry of Education
+   Source: 1991 Census of Population and Dwellings - Regional Summary (1992), Wellington, Department of Statistics
n/a   Not available
⊠   Source: Annual Programme Evaluation Reports
°   Source: Refund Application Forms

Note: Withdrawal percentages record the numbers of withdrawals from that category as a percentage of all withdrawers for that year.

These same data indicate quite a variance in withdrawal rates for various age categories between years. In 1993 the highest withdrawal rate recorded by any age group was in the 20-24 age range. Nearly one quarter of all withdrawing students were found to be within this age range, yielding an 8.7% rate (almost double the overall polytechnic rate), when compared with the numbers participating in this same category. However, this rate was double that observed the year previously for that same category. The 35-39 age category had the highest withdrawal rate in 1992. Consistently low drop out rates were recorded for both years amongst those aged 17 and under.

(b)   Age Profiles of Drop Outs from 'Formal' Programmes

Annual ('Formal') Programme Evaluation Report Data

Whilst a greater proportion of students withdrew from 'Formal' programmes than from Polytechnic programmes in general the highest proportion of withdrawals were recorded in the under 20 year old age group in 1993 (Table 6.5 and Appendix 14), probably reflecting the higher full time participation rate in these programmes than in 'Community and General' courses. However, missing programme data[4] cautions against assuming that these findings related to the age of withdrawers are representative of all 'Formal' programmes.

6.5.2   Ethnic Differences Amongst Drop Outs from WRCP Programmes and 'Formal' Programmes

(a)   Ethnic Differences between Drop Outs from WRCP Programmes

Refund Data

Maori students were found to have a particularly low drop out rate overall, with only about two percent leaving their programmes prior to completion in both 1992 and 1993 (refer Table a/b Appendix 13). WRCP had only a small number of Polynesian students (see Table 5.4, page 121) forming half a percent of the total student body. However, persistence rates were high according to refund data which suggested that all of the Polynesian students stayed to complete their programmes in both years.

Drop out rates amongst Asian students fluctuated over the two years of study, probably as a consequence of the small numbers involved. Withdrawal amongst overseas students was almost nonexistent. Full-time withdrawing overseas students were noted to be transferring to University or to be 'dropping down', ie reducing their study load, rather than leaving.

Europeans formed the greatest proportion of withdrawing students. However, they also had the highest participation rates, forming about two-thirds of the total WRCP student population. However, participation and drop out appear to be related, and when these figures were compared to determine a drop out rate for European students, this was found to be only slightly higher than the average drop out rate for the Polytechnic.

(b)   Ethnic Differences between Drop Outs from 'Formal' Programmes

Annual ('Formal') Programme Evaluation Report Data

Whilst Maori groups generally experience lower rates of withdrawal across all Polytechnic programmes, relatively high rates of drop out from 'Formal' programmes were noted, particularly in 1993 when 40% of all withdrawals were recorded as Maori (Table 6.5). Maori rates of withdrawal were 9% in 1992 and 21% in 1993 as shown in Appendix 14. This same source records that Pacific Island students had withdrawal rates of 33% in 1992 and 17% in 1993.

Much of this drop out was the result of attrition as evidenced by the fact that no Pacific Islanders officially withdrew according to refund data whereas six students left in each year, according to Annual ('Formal') Programme Evaluation Reports, and only one of these (in 1993) was a TOP withdrawal. Similarly, 9 Maori officially withdrew in 1992 and 13 in 1993, though 16 and 55 respectively are recorded as dropping out in Annual ('Formal') Programme Evaluation Reports, of whom only 3 and 5 were TOP withdrawals, the rest attritibutable to attrition.

6.5.3   Gender Patterns in Drop Out from WRCP Programmes Overall and 'Formal' Programmes

(a) Gender Differences between Drop Outs from WRCP Programmes

Refund Data

Women were more likely to leave during their programme of study than men, forming just under three-quarters of the withdrawing student population in both years (Table 6.5). When taken in the context of the high participation rate of women at WRCP a more realistic picture is given, showing the resulting rates of withdrawal to be less than 1% higher than the polytechnic average in any year (5.4% in 1992 and 5.2% in 1993). Although both part-time and full-time women demonstrated drop out rates above the polytechnic's average, full timers appeared slightly more likely to leave, especially in 1993 as illustrated in Appendix 13 a/b.

(b) Gender Differences between Drop Out from 'Formal' Programmes

Annual ('Formal') Programme Evaluation Report Data

Over the two years of the study, women in 'Formal' programmes of study were shown to have higher rates of withdrawal (16% in 1992 and 11% in 1993) than women in Polytechnic programmes in general, although the rates recorded were more or less in keeping with the higher than average drop out rates recorded in 'Formal' programmes (Appendix 14).

6.5.4   Disability and Drop Out

Refund Data

There was no information from this source about students identifying themselves as having a special learning need or disability.

Annual ('Formal') Programme Evaluation Report Data

Although forming only a small proportion of all withdrawers (Table 6.5) students with disabilities or those identifying special learning needs had higher rates of withdrawal from 'Formal' programmes than other students (Appendix 14) in 1993, though a lesser rate in 1992.

6.5.5   Summary

The drop out rate from 'Formal' programmes (this included attrition, TOP and official withdrawal) was considerably higher (14.6% in 1992 and 12.2% in 1993), Indeed, almost double, the equivalent revised drop out rates for Polytechnic programmes in general.

When the characteristics of withdrawers from 'Formal' programmes were compared with the overall drop out picture a number of interesting differences were highlighted. In particular, higher rates of withdrawal from 'Formal' programmes than from other courses were evidenced by women, Maori and Pacific Island students, and students with disabilities though this was not consistent over both years. There was some annual variation shown which, together with the small numbers involved, and in the case of age, the incompleteness of the data, lead to some questioning of the reliability of these findings.

6.6 Timing of Drop Out

This section develops a chronological picture of student withdrawal over the Polytechnic's academic year. Appendix 15 contains a full summary of part-time and full-time withdrawals by school, for each month of the year. Staff commentary on these data were sought.

6.6.1 The Annual Pattern of Student Withdrawal

Refund Data

The dates of completion of refund forms were compared with the Polytechnic academic calendar to ascertain whether there was any pattern associated with institutional events over the academic year as identified by Tremaine (1979), Kember (1990) and Woodley & Parlett (1983).

A 'three peak' pattern of student withdrawals was evidenced over both years, with the highest peak occurring in February/March, and another peak around June/July as shown in Figure 6.4. Generally withdrawals appeared to fall off towards the end of the year, except for a minor crest around September.

FIGURE 6.4

WITHDRAWALS BY MONTH
AS A PERCENTAGE OF TOTAL WITHDRAWALS JANUARY TO DECEMBER
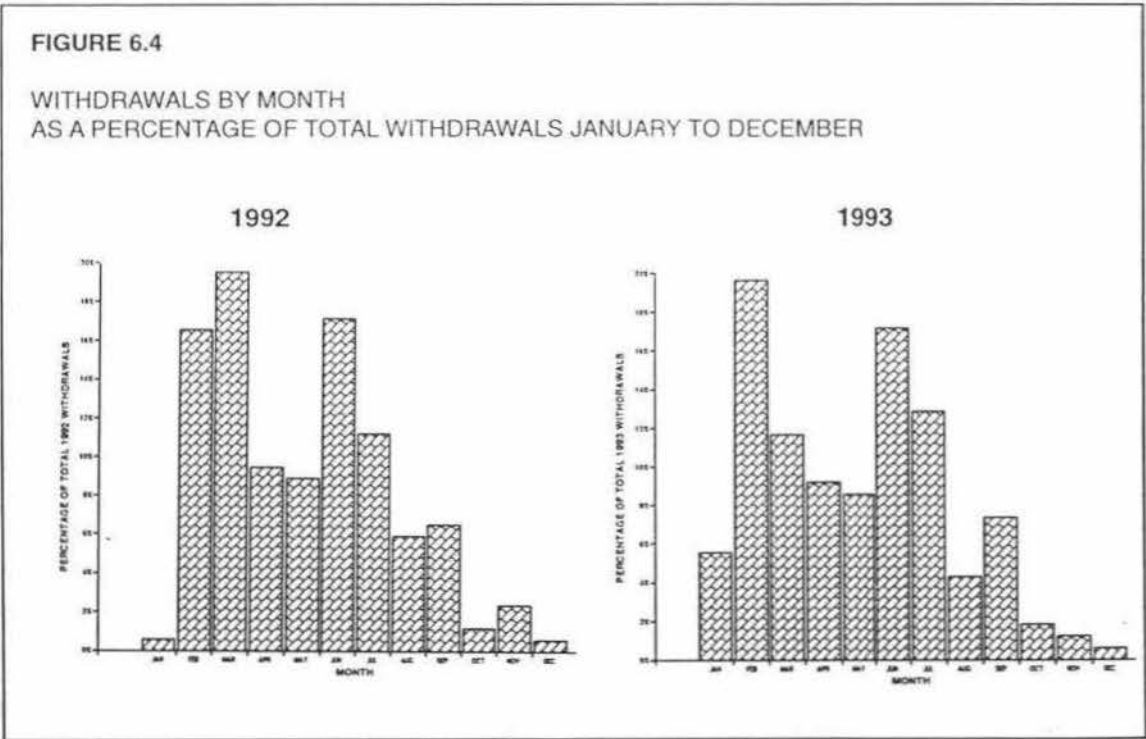
6.6.2 Variance Over Time by Nature of Enrolment

Refund Data

Graphs of these data (not included) indicated that full time and part time drop outs appeared generally to follow the same three peak pattern over the academic year.

6.6.3 The Perceptions of Service Sector Staff on Withdrawal Patterns

Member Checks and Informal Discussions:

The Service Managers, Student Support staff and Administration staff who deal with enrolment and withdrawal processes were presented with graphic information on WRCP student withdrawal patterns over time to gain their perspectives on these.

Administration Staff Perspective:

The withdrawal pattern was considered by Administration staff to be related to the operation of the Polytechnic refund policy which allows for a full refund to any student who withdraws within the first month of the programme. Administration staff considered that the two peaks (February/ March and June/July) could reflect the two semester cycle of programmes in the academic year, with the bigger peak in February/March accounting for full year programme refunds and the second peak mid-year reflecting semester two withdrawing students. The smaller peak in September could be related to refunds for students withdrawing from third term 'Community and General' programmes which commenced that month. An analysis of refund applications revealed that the latter were all refund applications from part-time students which would seem to support this notion.

The refund policy allows a half refund if withdrawal is between the fifth and eleventh week of programmes, but nothing after, (unless there are exceptional circumstances), possibly accounting for the overall decline in numbers officially withdrawing towards the end of each semester.

Student Services Staff Perspective:

Student Services personnel were also of the opinion that most students did not officially withdraw unless they were entitled to a refund. However, they maintained that many students just ceased attending without notifying the Polytechnic officially. By way of example the Student Services Manager indicated that around October each year she received a lot of requests for hardship grants, suggesting, she said, that financial pressures were a factor contributing to full year students leaving near the end of their programme. However, this financial hardship was not reflected in the official withdrawal statistics because of the lack of data about full-time drop outs over this period.

The Staff Development Manager's Perspective:

The Staff Development Manager had identified a pattern of student withdrawal through her work in assisting tutorial staff enhance their performance. She maintained there were three points

when students were more likely to leave, and these were related to the programme 'cycle'. The first point was at the beginning of a programme (for full-time programmes this can be anywhere between February and April) when a student found that the course did not match their expectations. Students were also likely to leave mid-way through the course (May, June, July, for full year programmes) when they were expected to became more task focused, and by comparison, the emphasis on group dynamics was reduced. At this point, she argued, some students lost their motivation because they saw that their goals were unrealisable. The third point was in the period immediately prior to finishing a programme (November/December). This point was attributed to the pressures of final assessments or, having met their personal goals, leaving to get a job, she said. While shorter programmes would have different beginning dates, mid points and ends, she thought that the drop out patterns appeared to correspond roughly to the programme cycle, except for the absence of the third expected peak at the end of the year.

These theories, the 'refund' and 'Programme cycle' explanations, and the ideas from previous researchers relating to the timing of examinations and the relationship with study breaks formed the basis for subsequent discussions with heads of schools.

6.6.4   School Variance Over Time - Heads of Schools Perspectives

Member Checks and Informal Discussions:

Heads of Schools were provided with information about these alternate theories and with a graphic summary of student withdrawal, both for their area and the whole Polytechnic. They were asked to ascertain whether there were any discernable patterns and, in particular, to give their views on whether there was any relationship between programme activities (eg. assessment schedules) and school specific withdrawal data. Feedback was obtained from about half of the Heads of Schools. Both written and oral comments were received and some comments were recorded as the result of follow up informal telephone discussions.

Feedback from Heads of Schools

In some schools not many students had left, so it was difficult to discern any particular pattern.

The Head of School of Agriculture/Horticulture noted that his school assessments were ongoing over the whole year and hence dismissed any suggestion that withdrawals were in any way related to the schedule of assessments. He felt that withdrawal in the School of Agriculture/ Horticulture was largely due to "private things getting in the way" including family problems and financial difficulties, rather than anything to do with the programmes themselves.

This suggestion was supported by the Head of School of New Directions in Education who commented that the reasons for withdrawal were to do with "personal problems for which a great deal of support was given".

The School of Information Systems noted that "in 1993 jobs became available on a more regular basis" and this was suggested as a reason to account for the low, but relatively regular, drop out over the entire academic year in this School.

The Head of School of Management thought that the pattern of withdrawal was "fairly expected" in light of the Polytechnic's refund policy, explaining that the absence of late year withdrawals was because "people don't bother" to complete withdrawal forms when no refund is expected. She commented that drop out was often a "gradual lack of attendance" - she was sure many students were not aware of the process required to withdraw. However, she maintained students "now stay on rather than drop out because the cost of courses is higher than in previous years".

The Head of School of Community & Health could find no pattern of part-time withdrawals associated with School activities - they were linked with the refund policy, she thought. However, she observed that many full-timers withdrew at the beginning of the year, often before the programme had begun, or within the first few weeks of it commencing. She considered that these early withdrawals were the consequence of the problems students experienced in juggling competing study and work/family commitments or the result of differing expectations of what was being offered.

6.6.5   Summary

The many differing interpretations of the student 'official' withdrawal pattern would suggest the possibility of many factors acting to produce the 'three peak pattern' of drop out over the academic year. However, it did appear that the Polytechnic's refund policy had a major effect.

6.7 Reasons for Leaving

6.7.1   Student Withdrawal From New Zealand Polytechnics

Sector-wide Questionnaire Data and Member Checks

This survey was initiated mid-June, 1992 and in the two and a half month period before the 31st of October (the date specified by APSU as the 'cut off') 199 responses were received from 14 polytechnics. (Bay of Plenty, Manukau, Otago, Southland, Tai Poutini, Manawatu, Wanganui,

Hawkes Bay, Central Institute of Technology, Nelson, Auckland Technical Institute, Christchurch, Waikato and Northland). Extrapolating these figures (assuming a similar rate of withdrawal over the entire year) gave 1,000 odd withdrawals, an average of 71 for each institution. This suggested the response rate was very poor because several of the participating polytechnics have very large student populations: Christchurch for example is one of the fourth largest polytechnics with over 20,000 students and 4,500 EFTS (Scott, 1994). Unfortunately the response form did not indicate the respondents' polytechnic, so there was no indication of different polytechnic response rates.

Analysis of responses indicated that "living expenses too high" and "attractive job opportunity" were individual factors rated most commonly as very important in influencing withdrawal, closely followed by "family illness or obligations", "cannot get sufficient part- time/holiday work" and "lack of interest in course content" as shown in Table 6.6. The emphasis on financial factors in withdrawal was thought by the APSU administration staff member to be due to changes in government policies on student support and allowances. However, the possible bias introduced as a consequence of the small sample size and the nature of the sample were other possible explanations for these findings.

The APSU survey clustered the 23 single factors into three categories - academic, personal and financial. It was interesting to note that the "academic" category overall had the highest number of responses featuring as "very important" in the decision to leave the polytechnic, (153 responses) with "course content too difficult", "difficulty with skills required", and "overall work load too great" as single factors ranking not far behind those mentioned previously.

Personal reasons were also commonly cited with 139 responses indicating these factors were very important reasons in the decision to leave the polytechnic. The most frequently rated choices appeared to fall into two main categories - those related to the family (family illness or obligations) and those pertaining to the individual (personal illness, accident or disability; emotional or psychological stress, or not enjoying student life).

The financial category also had a sizeable (130) proportion of responses. Indeed, all the factors listed were found to have some respondents selecting them as very important and many students identified several factors as very important in the decision to leave. Only a few students specified "other" reasons for leaving.

Summary

Despite the limitations of these results, it was evident that most students selected more than one factor as contributing to the decision to leave. Academic and financial reasons were selected more often than might have been expected from the results of previous drop out studies.

TABLE 6.6

STUDENT WITHDRAWAL FROM NEW ZEALAND POLYTECHNICS:
FACTORS IDENTIFIED AS "VERY IMPORTANT" IN THE DECISION OF LEAVE THE POLYTECHNIC

Factors	Number of Responses (n = 199)
Academic	
Accepted for a course elsewhere	15
Workload within a particular part of course	11
Overall workload too great	22
Difficulty with skills required	20
Course content too difficult	20
Lack of interest in course content	24
Preferred choice of course prevented by limitation on student numbers	13
Quality of teaching in course	15
Other (general teaching, failed course, not enough time off, entered course too late, failed course, course not up to expectation)	13
TOTAL	153
Personal	
Family illness or obligations	25
Personal illness, accident or disability	19
Pregnancy	14
Relationship problems	15
Emotional or psychological stress	22
Not enjoying student life	22
Sexual or other form of harrassment	14
Other (Teacher, playing rugby overseas, friend committed suicide, got a dose twice):	8
TOTAL	139
Financial	
Attractive job opportunity	34
Fees cannot be paid	17
Cannot get sufficient part time/holiday work	24
Living expenses too high	35
Daily travelling expenses too high	19
Drugs to dear	
TOTAL	130

6.7.2   Student Withdrawal from WRCP

WRCP Questionnaire Data and Member Checks

Results of the questionnaire which ascertained students' reasons for withdrawal and plans after leaving the programme are described. The answers which students gave in response to the question seeking their reasons for withdrawal were analysed, and compared with their stated destination after leaving their programme of study, in order to develop further, a picture of the leaving behaviour of WRCP students in terms of who leaves, when, and why. Comparison of the questionnaire responses in 1992 and 1993 aimed to establish whether there was any significant difference in student patterns of withdrawal and their reasons for leaving over the two year period.

6.7.2.1 Reasons For Leaving The Programme

(a) WRCP Students Self Reported Reasons for Leaving

There was a good response rate to the open ended question (Question 1) on reasons for withdrawing, with 89% of the 169 students completing the refund applications also completing the survey on reasons for their withdrawal in 1992, and 86% of the 163 applicants in 1993. Part-timers were more likely to give a response (89% of 138 responded in 1992 and 80% of 110 in 1993) than full-timers (87% of 31 in 1992 and 79% of 53 in 1993) but the differences were small and probably not significant.

Generally respondents gave a single brief reason for wishing to leave the programme they were enroled in.

Analysis of withdrawals by students' own reasons showed "lack of time", or "work overload", as the most commonly given (Figure 6.5). Overall "attractive job opportunity" was the second most commonly cited, with course-related reasons on average the third most frequently given. "Personal/health" related reasons, leaving the district and family illness or family obligations were the next in rank order of frequency. Apart from time related factors, there was quite a lot of variation in the frequency of responses between the two years. However, few cited financial reasons for withdrawal in either year as shown by the summary of these data, Appendix 17.

In 1992 two people gave individual reasons which were unique: transport problems due to change of course venue, and the opportunity to attend University, and these were placed in the "other" category. In 1993 there were six individual reasons given which did not fit the categories developed in the previous year, with two transferring to University study, three students moving from part-time to full-time polytechnic programmes, and regrettably, one recording the death of a student.

FIGURE 6.5

REASONS FOR WITHDRAWAL
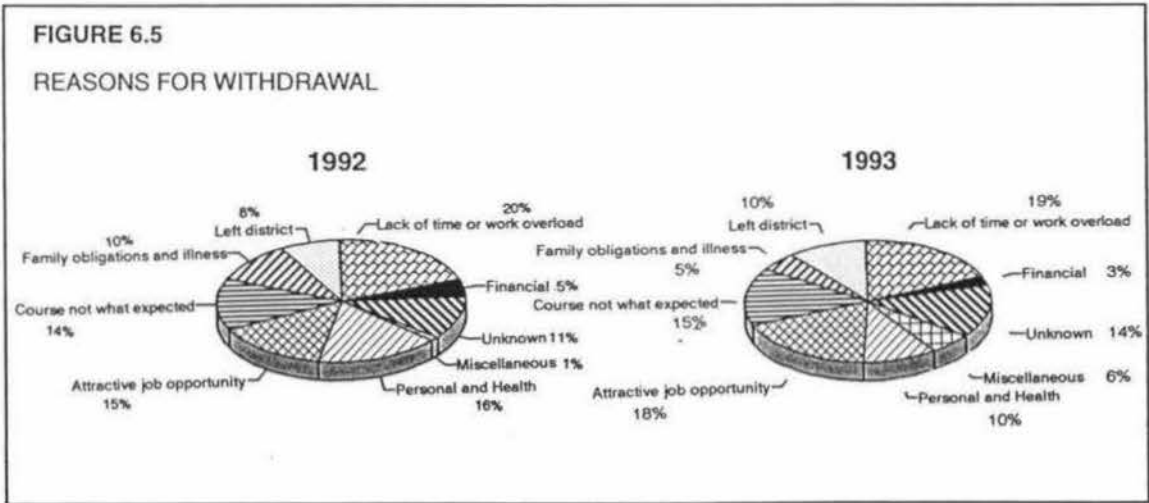
It was noted that many of the withdrawal forms which who gave no reason for withdrawal (10% of all applications) did not indicate their planned destination in the subsequent fixed response

question either, suggesting a reluctance to participate in the survey, although the rest of the refund form was completed. (This was required otherwise no refund could be given.) There was no noted chronological pattern for non-respondents over the year.

(b)   Differences Between Full Time and Part Time Students' Reasons for Leaving

Different reasons were given by full-time (FT) and part-time (PT) students over the academic year, as shown in Appendix 17.

(i)   Full Time Students' Reasons:

Full timers' reasons for leaving were restricted to a narrower range of categories than part timers. For full time students "attractive job opportunity" was the most popular reason for withdrawing from their programme of study, with one-quarter of all students citing this in 1992. "Personal/health" related reasons were the second most frequently given, followed by "family illness/obligations", "financial", and "leaving the district", in rank order, although the latter categories were reported by only a few full timers.

1993 showed an increase in full-time withdrawals. Most of these students (nearly one-third) left because of an attractive job opportunity as in 1992. However, one-sixth of all the full-time withdrawers did so because they were planning to leave the district. Few other categories had numbers of any significance. Thus, 1993 represented quite a different picture of full time students' self reported reasons for withdrawal from that described in 1992, apart from the common top rated reason which related to the offer of an attractive job opportunity. A month by month analysis (not included) showed that students left their programmes to move into employment over most months during the first two terms of the year. However, no full-time withdrawals for any reason were noted in May or after September of both years.

(ii)   Part Time Students' Reasons:

Part-timers' predominant reasons for wishing to withdraw from their programmes were in the "time clash", "time overload" and "work commitments" category, forming about one-quarter of all part-time withdrawals in both years. Part-time students were also more likely to record the "course was not as expected" as a reason for withdrawing. Course related reasons were the second most frequently cited by part timers over both years, followed by "personal/health" and "attractive job opportunity". Part-timers were found to withdraw right across the calendar year, for a wide variety of reasons.

(c)   An Analysis of Patterns of Leaving Over the Academic Year by Reason

Each category of the responses shown in Appendix 17 was graphed (not included), to see whether there were any chronological patterns associated with particular reasons for leaving. A finer analysis within each reason category was also conducted to ensure that the process of coding had not masked significant associations.

(i) Time Related Reasons for Drop Out:

There was a consistent record of dropping out for time related reasons across the academic year, with peaks corresponding to the greater number of students leaving at the beginning of each semester and term, particularly evident in the 1992 data. In 1992 time clash/overload reasons featured highest in June, but in 1993 the peaks in withdrawals for time related reasons appeared in February, although the differences in numbers withdrawing between months were so small that the significance of these findings could be questioned. Time clash, overload, and work commitments were most commonly noted by withdrawing part time students over both years of the study, as discussed in the previous section. These reasons were grouped together because they were considered to have a common theme related to time management problems. The part-timers giving time related reasons formed such a large number (34 in 1992 and 30 in 1993) that this category had the highest rating over all the categories of reasons, even though students who made the commitment to full-time study were totally absent from this category in 1992 and were represented by just a single respondent in 1993. Work commitments were grouped within this category but were specifically mentioned by only a small proportion of the withdrawers in both years.

(ii) The Course Did Not Meet the Students' Expectations:

Students who withdrew because the course did not meet their expectations appeared to withdraw early in the semester, with a cluster of withdrawals occurring between February and April of each year (the beginning of semester one) and another at the beginning of semester two in June/July. The smaller peaks of August/September withdrawals in this category reflect early leavers from term three community programmes.

Overall "course not as expected" (CNE) was the third most frequently given reason (fourth in 1992 but the third ranked in 1993) due to the influence of high part-time responses to this category. The numbers of students withdrawing because the course did not meet their expectations were found to be similar across the two years, with 23 students (17%) of part timers citing CNE in 1992 and 22 (20%) in 1993. No full-time students featured as withdrawals beyond July.

Very few full-timers gave reasons which indicated that the course did not meet their expectations. "Course not as expected" included academic factors such as a change in tutor or an unacceptable delivery style (only one person in each year commented on the tutor or tutoring), or more frequently, finding that the level of the course was too advanced for the needs or ability of the student. Of those part-time leavers whose responses were classed in the "course not as expected" category, just over one-sixth (17%) specifically noted that the course

they had enroled for was "too advanced" in 1992 whereas in 1993 only one part-timer gave this reason. There was a very small (less than 1% per annum) number of students who complained that they had been supplied with incorrect information regarding prerequisites for particular programmes. Others (again less than 1% in each year) had not been advised of changes in the timing or location of programmes which subsequently meant they were unable to attend.

Some reasons were of a very general nature, describing the course as "unsuitable" or "no good" (5% in 1992 and 1% in 1993) without giving any further explanation as to how it did not meet their expectations or needs.

(iii) Attractive Job Opportunity as a Reason for Leaving:

In contrast there was a relatively regular pattern of withdrawal over the whole year for the students who gave their main reason for leaving as an attractive job opportunity in 1992, through this was more spasmodic in 1993. Attractive job opportunity was the most common reason given by full-time students and more of them (17) left for this reason in 1993 than in the previous year (n=8).

Part-time students attend both day and evening classes and so it was not surprising to note that the (n=17) part-time withdrawals for employment reasons also evidenced quite an even spread over the year, in 1992, although it only ranked as the fourth most commonly cited reason by this group that year. It was the third most commonly cited reason (by 13 withdrawers) in 1993 (equal with "personal/health").

The responses to the fixed option "destination" question indicated that a much higher percentage of withdrawers had plans to go into employment, although this was not their main reason for leaving (discussed in detail later in Section 6.7.2.2).

(iv) Personal/Health:

"Personal/health" was a category of student reasons for dropping out which also received relatively regular additions over the two years.

This was the second most commonly cited reason overall in 1992 (27 or 16% of all withdrawals) and also for full-time students (23% representing 7 students) although it was third for part-timers (15% being 20 students). This category encompassed personal reasons given for withdrawing, such as "marital hassles" and pregnancy (10% of full-time and 3% of all part-time withdrawals cited this latter reason for leaving in 1992, but none in 1993) as well as personal illness and other health problems including emotional difficulties.

In 1993 there was a big reduction in withdrawers citing "personal" or "health" reasons for leaving (only 16 students), dropping to fifth ranked overall, mainly because very few full-timers (n=3) left for this reason. Part-timers giving this reason (n=13) formed 12% of all drop outs, a similar population to that seen in 1992, and once again it was the third most frequently cited reason by this group of students.

(v) Family Obligations and Family Illness:

In 1992 about one in ten students (n=18) withdrew because of sick family members or to meet other family obligations. It was the third ranked reason for full-timers withdrawing (n=5) and fifth amongst part-timers (n=13), evidencing a more erratic pattern but one which spanned the academic year for both groups. In 1993 this category of withdrawers was half (8) that recorded in 1992, with both full-timers and part-timers recording this reason with much lower frequencies. With one exception, withdrawals for family related reasons were confined to the first half of the year in 1993.

When personal illness was isolated out from the "personal/health" category and analysed together with those who identified sickness of members of their family as the reason for withdrawing, it was found that the majority of these withdrawals (62%) occurred over the winter months between June and September in 1992.

1993 evidenced a much lower incidence of withdrawal for both family and personal/health (representing 24 or 15% of all withdrawers), half that of 1992. It seems this may be attributed to the milder temperatures recorded over New Zealand in 1993 (see Figures collated from data provided by the Meteorological Service, Appendix 18).

(vi) Leaving the District:

Leaving the district was the fourth most common reason given by withdrawers in 1993 and sixth most common in 1992. In terms of actual numbers, (17 in 1993 and 13 in 1992) few drop outs stated leaving the district was their reason for withdrawing and the lack of pattern evident over the year may have been attributable to the small numbers involved. In 1992 more part-timers than full-timers recorded this reason but in 1993 there were about equal numbers of each type of student giving this response.

It was recognised that this category of reasons for withdrawal covered a number of contributing factors: family ties such as the spouse gaining employment, or moving to seek job or training opportunities elsewhere were examples of explanations occasionally given for leaving the district. Interpreting the "leaving the district" response frequently required comparison with the answer selected to the fixed response question on plans after leaving, as described later in this section.

(vii) Financial Reasons for Leaving:

The numbers withdrawing for financial reasons over both years were very small (8 in 1992 and 4 in 1993), and, thus, it is doubtful whether the variation between years, which showed a 50% decrease in drop out for financial reasons, could be regarded as significant.

(d)   Who Leaves and Why: A Comparison of the Demographic Characteristics of Leavers
        With Reasons Cited for Withdrawal

This section investigates whether students' self-reported reasons for withdrawal are associated with particular demographic characteristics: gender, ethnicity and age. Although the numbers in some of these categories were very small, this exercise was considered important because previous drop out researchers suggested that overall drop out rates may mask significant deviations from the norm.

(i)   Differences Between Men and Women's Reasons for Leaving

Time related reasons were given most frequently by drop outs overall (n=34) but more than two thirds (n=25) of students citing these reasons were found to be women. This finding was only in part attributable to the higher drop out rate evident amongst both part time and full time women (n=15). Withdrawal due to family obligations or illness of a family member was four times as likely to occur for women and particularly small numbers of men (n=3) cited these reasons, as shown in Appendix 19.

There was little pattern associated with the gender of the respondent for attractive job opportunity, personal illness, leaving the district, course not as expected, or finances, as reasons for leaving over the two years of study.

(ii)   Ethnic Group's Reasons for Leaving

Europeans formed about two-thirds of the total student population at WRCP and so not surprisingly they accounted for the largest proportion of the withdrawing students, as shown in Table 6.5. Analysis of the reasons which students describing themselves as European gave on withdrawal showed a pattern consistent with that described for the withdrawals overall, with the most common reason cited by Europeans being time related due to the high part-time responses for this category. The next most frequent reasons cited by part-time Europeans were "course not as expected" whereas full-timers recorded "attractive job opportunity" most often. These data can be found in Appendix 20 a/b.

Numbers for "New Zealand Maori", "other", "overseas", and "Asian" categories were so low that little pattern of reasons for leaving could be differentiated from year to year or in comparison with their European colleagues. According to this data, no Pacific Islanders officially withdrew from programmes in both years of the study, which in itself is significant.

(iii)   Reasons by Age

Whilst the analysis by age of the reasons for withdrawal was limited in its ability to reach conclusions because of the small numbers in certain age categories, a clear tendency was noted in 1992, and observed more strongly in 1993 results, for younger leavers (under 30) to cite the offer of an attractive job opportunity as the reason for withdrawing. Similarly those students citing leaving the district were more likely to be younger full-timers, as shown in Appendix 21.

Leaving because of time related problems or because the course was not as they had expected were reasons more likely to be given by students over 30, especially those who were part-timers. Family obligations or illness of a family member, and personal reasons, including the student's own ill-health, were not reported in any consistent pattern associated with age categories, although an overall reduction in the incidence of these reasons was noted in the 1993 results. Few leavers of any age group gave financial reasons for leaving their programmes.

(e)   Programme Coordinators Perspectives on the Reasons Why Students Dropped Out

Annual ('Formal') Programme Evaluation Report Data

Programme coordinators generally gave detailed accounts of their perceptions of students' reasons for leaving, describing the support given to try and assist where leaving was associated with personal or family problems, as it appeared was often the case:

"one person left because of extreme personal problems outside the course and continued to see the polytechnic counsellor".

In these situations drop out was often associated with missed attendance:

"one student contracted repeated bouts of influenza and felt she had missed too much class work; by the time we understood this to be the case she had also lost the motivation".

Moving out of town, and gaining employment were also commonly mentioned.

The most frequently cited responses, however, appeared to relate to academic aspects. These ranged from a mismatch of student expectations with the course as offered

> *"one women left because she didn't like the course"*

to concerns about the level of difficulty, he was

> *"not at all ready for this type of programme"*

and

> *"one left early in the first term when it became obvious considerable effort would*
> *be required to continue".*

Concerns about the workload

> *"unable to keep up academically"*

and

> *"too much work"*

were also mentioned. Many students who were dissatisfied changed programmes: one decided the course was

> *"too intense and transferred to Career Options"*

and another

> *"joined another course more appropriate to student needs".*

It appeared that motivation was a prime issue for several drop outs:

> *"four [leavers] did not put in any significant effort and got hopelessly behind*
> *with the work".*

(f)   Summary

Programme coordinators' reasons and the results of the sector-wide questionnaire, suggested that academic reasons may be more important in the decision to drop out than evidenced from WRCP students' self reported reasons for leaving. Personal and family reasons appeared to be viewed similarly in importance by both students and staff alike as reasons for withdrawing. Finances were identified by the polytechnic sector questionnaire as an important factor in withdrawal but rarely mentioned by WRCP students. However, Student Services staff perception suggests students suffering financial hardship are more likely to form part of the attrition statistics and hence would not have been part of these results. Full time and part time students, younger people and women were student groups which evidence clearly differentiated reasons for withdrawing.

6.7.2.2   Destinations

WRCP Questionnaire Data

By far the greatest proportion of respondents indicated employment as their planned destination over both years, and in 1993 there was a 7% increase in numbers of students citing this, as shown in Figure 6.6. A summary of the planned destinations of withdrawing students in 1992/93

as indicated by responses to the fixed response section of the questionnaire, is provided in
Appendix 22. As can be seen the response rate was not as good as for the previous question,
with only 48.52% (n=82) of those officially withdrawing responding to this part of the
questionnaire in 1992 and 50.31% in (n=82) 1993.

In both years employment was favoured more strongly by women leavers (n=20 in 1992 and 25
in 1993) than men (n=12 in 1992 and 13 in 1993), and full-time women appear to be slightly
more likely to give this destination than part-timers.

Further training was the second most frequently rated destination overall although this was
marginally less favoured in 1993 than the year previously. Further training was also favoured

FIGURE 6.6

DESTINATION OF WITHDRAWING STUDENTS
AS PERCENTAGE OF RESPONDENTS
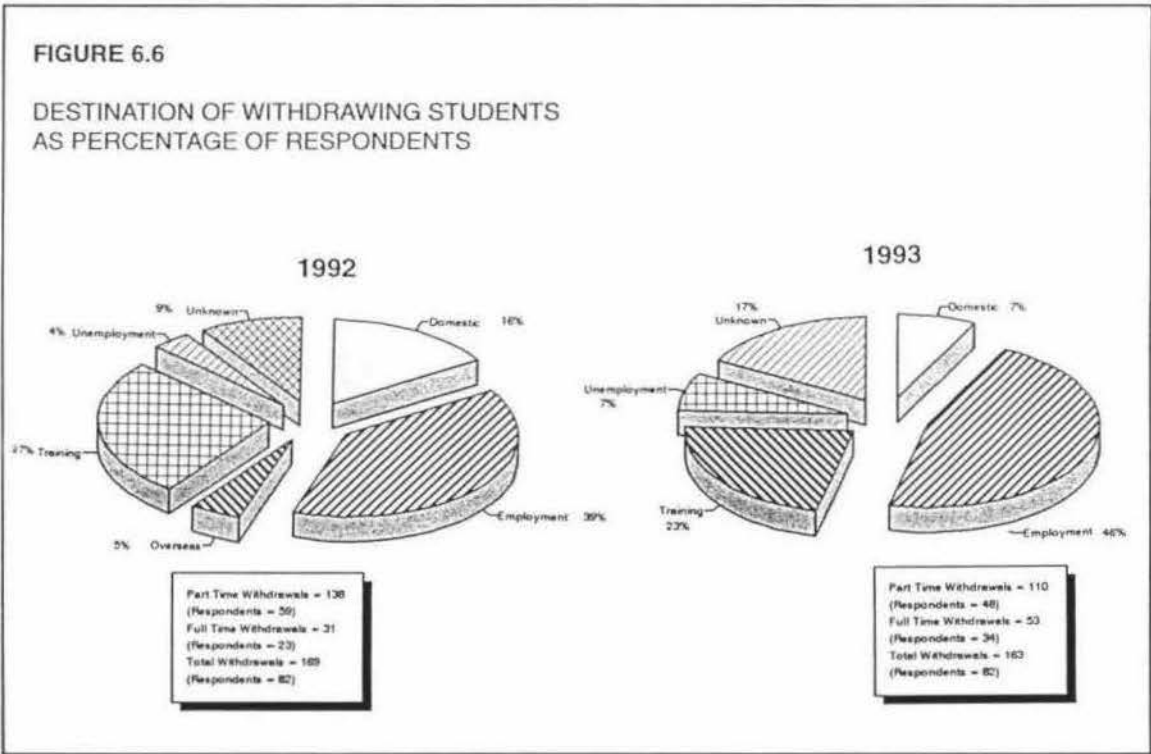
more by women leavers than by men. Those withdrawals citing "domestic" as their destination
after leaving the programme were generally part-time women. A sizable proportion of the
withdrawals (more than one in ten) were not sure (unknown) of their destination after leaving the
programme but a few stated unemployment or overseas as possibilities.
A few (2% of official withdrawals in 1992 and 3% in 1993) replied to the destination question,
but failed to complete the reason section -these respondents tended to tick either the
"employment" or the "domestic" option. As noted previously (Section 6.7.2.1), some students
did not reply to either of the survey questions inserted into the refund application form.

A comparison of respondents planned destinations with the reasons they gave for leaving in the
previous section of the questionnaire (Appendix 23) showed a fairly close correlation between

the employment destination and attractive job opportunity as a reason for leaving. As noted previously, a much higher percentage of withdrawers had plans to go into employment (39% in 1992 and 46% in 1993) than indicated "attractive job opportunity" as their reason for leaving (15% in 1992 and 18% in 1993).

Apart from this association, these data suggested little relationship between reason for leaving the course and their planned destination. For example, of those recording training in 1992 (n=22), about one-quarter indicated their reason was because they were leaving the district, a further quarter because the course was not as expected, a third quarter gave time clash/ overload reasons, with the final quarter citing either personal illness or family obligations. Apart from the slightly greater proportion of withdrawals going into further training citing time related reasons for leaving, the pattern of 1993 was pretty similar. The small numbers in all other categories limited suggestions of any significant relationships.

Annual ('Formal') Programme Evaluation Report Data

The overall proportion of students completing 'Formal' programmes of study was similar over both years of study, as illustrated in Table 6.7.

Of those students completing 'Formal' programmes the percentage indicating progression to further education and training showed a decrease (10%) although a small increase in actual numbers overall. The proportion of students progressing to employment increased slightly (by about 5%) although this represented an additional 141 students finding employment above 1992 figures, a 70% increase in actual numbers.

Analysis of equity target groups showed a decrease in the proportion of students completing their programmes and progressing to further education and training across all these categories of students, except for Maori who increased their rate of progression to further education and training both as a proportion (a 10% increase) and numerically (an additional 56 students). While greater numbers of women, disabled and Maori students stated progression to employment as their planned destination now that their programme of study was completed, only the latter evidenced an increase in proportional terms in those citing this destination. From viewing students' end of course evaluations[5] for several programmes in 1993, it appears that a sizable proportion of students are uncertain, at that stage, what the immediate future holds for them. Many have not yet begun applying for jobs and others plan to take a break before commencing job hunting.

TABLE 6.7

PLANNED DESTINATIONS OF STUDENTS COMPLETING FORMAL PROGRAMMES OF STUDY, AS A PERCENTAGE OF THE TOTAL NUMBER OF STUDENTS ENROLED, BY CATEGORY

	1992 (total & % of total enrolments) n = 784	1992 % by EEdO Category				1993 (total & % of total enrolments) n = 1127	1993 % * by EEdO Category			
		Disabled n = 12	Maori n = 259	Pacific Island n = 7	Women n = 448		Disabled n = 70	Maori n = 259	Pacific Island n = 6	Women n = 701
Successful Students Of the students enrolled in certificated programmes the percentage who completed were:	85.3% (669)	91.7% (11)	87.0% (160)	71.4% (5)	78.6% (362)	64.3% (725)	10.0% (7)	65.3% (169)	50.0% (3)	59.6% (418)
Progression to Further Education and Training Of the students completing certificated programmes the percentages indicating progression to further education and training were:	43.8% (343)	75.0% (9)	44.6% (82)	57.1% (4)	39.3% (176)	33.7% (380)	11.4% (8)	53.3% (138)	50.0% (3)	30.5% (214)
Progression to Employment Of the students completing certificated programmes the percentages indicating progression to employment were:	25.9% (203)	50.0% (6)	13.0% (24)	14.3% (1)	24.1% (108)	30.5% (344)	15.7% (11)	15.1% (39)	16.7% (1)	21.3% (149)

Comment: Low rates of completion are due to high drop out from certain programmes, for example Diploma of Leisure Studies, Advanced Business Computing, Foundation Art/Craft/Design, Horticultural Technician Training, Conservation Corps, Certificate of Landscaping, Certifidate of Horticulture, Pre-Trade Carpentry, Automotive Trades, 2nd Qualifying Hairdressing, National Nanny Certificate, Diploma Social Work, where more than one-quarter and in some cases more than one-half of students did not complete.

Source: Annual programme evaluations.

Note: These data do not match the totals in Appendix 14 because of differing response rates for this section of the programme report.

Summary

Comparisons between the 'common' destination choices of leavers who completed their programmes and drop outs would seem to indicate that for the majority of Polytechnic students, employment is a major goal. Increased progression into employment was also noted for both student groups in 1993. One staff member suggests a link between changing economic conditions as identified in Chapter 5. No other consistent pattern was evidenced across the other categories. Programme report data did not allow direct comparability with refund data as there is no Ministry requirement to report on those citing "domestic" and "unemployed" as their post course destination.

6.8 Summary

In this chapter, enrolment and withdrawal data were brought together with information from the Annual ('Formal') Programme Evaluation Report data, questionnaire responses and the perspectives of significant others, in order to establish the extent of drop out at WRCP and to describe the pattern of withdrawal. Findings across the two years of the study were generally very consistent which gave a certain degree of confidence in their validity.

An examination of the results has highlighted several critical issues related to the extent and significance of the Polytechnic drop out rates, patterns of withdrawal associated with particular schools and programmes, differences between course participants and drop outs, and the various perceptions of reasons for dropping out. These issues will be discussed in the following chapter.

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[1] Definitions of terminology associated with the leaving behaviour of students are described in the glossary at the front of this document.

[2] Figures have been adjusted for multiple enrolments so they reflect actual numbers of students, rather than numbers of enrolments. There were in excess of 300 multiple enrolments in each of the years.

[3] Apart from the School of Maori Studies which continued to use the old forms.

[4] The 1993 report detail allowed comparison of age categories of withdrawal from 'Formal' programmes: 36.58% of participants age-related data was unknown, predominantly from three schools as mentioned previously. These data were not required by the 1992 standard report format;

[5] Programme coordinators collate this student-generated data to complete the annual programme reports for the polytechnic's academic board.

CHAPTER 7:

DISCUSSION

Two major conceptualisations of drop out, the 'integration' and the 'investment' theories, are referred to in the extensive body of literature associated with drop out from higher education. Common to both these theories is the notion of 'cost/benefit' analysis which suggests that drop out occurs when a student finds the costs of studying outweigh the benefits or rewards. Whilst recent changes to the funding of tertiary education have resulted in increased costs for both the institution and the student, several drop out researchers, notably Johnes (1990) point out that finances are but one of many factors which affect a student's determination of the costs and benefits of continued attendance. Indeed, three categories of variables associated with the student, the environment and the institution were identified as 'very important' by most of the 'investment' and 'integration' models developed to account for drop out. Although it is considered a descriptive rather than predictive model, Powell et al's (1990) "multi-variate framework" showed particularly clearly the antecedent nature of a student's background and characteristics, and how they are thought to influence the effects of other variables.

This study aimed to establish the extent and nature of drop out at Wanganui Regional Community Polytechnic and to develop a baseline of information against which ongoing monitoring of the effects of government changes could occur. The findings reported in the last two chapters have established this information base, describing the pattern of participation and drop out at WRCP over 1993/1993 in the context of changes which occurred in this period. They also highlighted several critical questions concerning the influence of factors associated with the student, the institution and the environment on drop out from WRCP.

7.1 The Institution

7.1.1 The Extent of Drop Out and the Significance of the Institution's Drop Out Rate

What was the extent and nature of the drop out 'problem', WRCP administrators wanted to know. However, the answer to this question could not be developed by reference to the numbers of withdrawals alone. Drop out needed to be considered in the context of participation and other institutional and environmental factors.

This investigation of student drop out responded to WRCP administrators' concerns that the economic viability of the Polytechnic might be at risk if the changes in government funding of

tertiary study resulted in increased drop out as some predicted. Tinto's (1975) 'integration' model attempted to throw some light on the role of the institution in the drop out process. Tinto argues that because drop out is the outcome of a multidimensional interaction between the student and the institution, the characteristics of the institution determine the development and integration of individuals within it, affecting the academic and social climates or 'presses' with which the student must come to grips if they are to successfully complete their programme.

The review of the socio-economic context of polytechnic education in New Zealand identified changes in the operating environment of these organisations which may have affected drop out. The analysis of archived information and that gathered from informal discussions with polytechnic staff (Chapter 5) indicated that government policies aimed at bringing about economic restructuring, had indeed, had significant effects on Wanganui Polytechnic. These government policies, especially those associated with the funding of tertiary education, resulted in changes to WRCP's activities, to its administrative structure, to the composition of its student population and on its operations, resulting both in an increased range of provision but also increased programme fees. Despite these changes the picture of WRCP drop out, pieced together from a variety of data sources to include both 'official' withdrawals and attrition indicated that relative to rates cited in other studies both overseas and in New Zealand (Tight, 1992, cites rates ranging from 10-40%), the drop out rates established at WRCP were very low. But what was the significance of this finding?

As far as the institution is concerned, there are both directly measurable and less tangible costs associated with drop out, and hence WRCP administrators' concerns. Most of those students who officially withdrew (the majority of drop outs) did so because they were entitled to a refund, so the loss of students equates directly with a loss of revenue. All drop outs also represent wasted institutional resources which are hard to quantify, but nevertheless real - costs associated with promotion, selection and enrolment, with the provision of student services and with learning (class materials, tutor time and learning support). The 'costs' were higher than initially thought because of the 'hidden' drop out from TOP programmes and the loss by attrition which was found to have occurred from 'Formal' programmes. Unfortunately the Polytechnic had no mechanism for establishing attrition from 'Community and General' programmes, suggesting that the institutional drop out rates cited were under estimations of the true drop out rates.

Whilst it was recognised some level of drop out may well be inevitable (many students withdraw for personally positive reasons such as beginning a new job, or the opportunity of further training according to Knight, 1991), WRCP administrators were concerned that if the students' reasons for leaving were associated with dissatisfaction with some aspect of either programme or service delivery, the reputation of the Polytechnic as a quality provider may be at risk.

Because dissatisfied customers are known to talk to between 20 and 30 people about their experiences (Gedye, 1992) the less tangible costs for the polytechnic include the possibility of longer term marketing problems and loss of its competitive edge. This notion is supported by Abbott-Chapman, Hughes & Wyld, (1992) who maintain that drop out is an important institutional performance indicator for evaluating the quality of educational provision. These authors maintain that whilst successful course completion is not the only measure of performance by the individual student, and rates of course completion or drop out are not the sole measures of quality provision by an institution, these are clearly important indicators of the educational health or maintenance of both.

In contrast Cope & Hannah (1975) argue that drop out rates are directly related to the selection policies of different types of institutions, with lower rates evidenced in institutions with highly selective admissions policies compared to more open or less selective systems. Bean (1985), one of the main protagonists of the 'investment' theory of drop out, considers that many of the outcomes of higher education result not from the organisational environment, but from institutional selection of students who already possess the behaviours and attitudes required to succeed. By "improving" the selection processes Jones et. al. (1976) maintain institutions can reduce the "wastage" of non-completion. The next section discusses selection policies and other institutional characteristics as factors influencing the drop out rate.

7.1.1.1   Characteristics of the Institution as Factors in the Drop Out Rate

Institutional Policies

Whilst community courses at WRCP generally had open entry, accepting students in order of enrolment until the maximum class size was reached, 'Formal' programmes were found to be more discriminatory, selecting students in a manner consistent with published (mostly academic) criteria. According to Jones et. al's theory, the drop out rate for community programmes might have been expected to have been high at WRCP, though this was not supported by the data available[1]. The drop out rate from 'Formal' programmes was found to be higher, particularly for minority groups, than that from Polytechnic programmes generally, a finding which did not give support to Jones et. al's theory.

Institutional Size

Astin suggests that drop out rates are a product of institutional size, with small institutions having uniformly higher drop out rates. Tinto (1975), 'father' of the 'integration' theory of drop out, disagrees, arguing that smaller institutions are able to enhance persistence through provision of greater personal attention and a more collegial environment. As the fourth smallest

polytechnic in New Zealand, WRCP's slogan of "quality and caring" would seem to suggest a deliberate strategy was in place to create such a culture and this may have been a factor in the low drop out rates at WRCP

Smaller institutions were thought to appeal to students who came from small town or rural backgrounds (Astin, 1975). Indeed, at WRCP most of the 'out-of-towners' were found to originate from such areas, supporting this notion as an explanation for the relatively low drop out rate experienced at WRCP.

Institutional 'Fit'

The fact that the Polytechnic student population was relatively similar to the Wanganui regional population profile would also seem to suggest that there was a degree of comfort or 'fit' experienced in the social setting of the institution. The importance of 'fit' in student retention was highlighted by many previous researchers including Astin (1975), Cope & Hannah (1975), Marinaccio (1985) and Pantages & Creedon (1978). Marinaccio (1985) explains that drop out is caused by lack of 'fit', that is, the degree of discrepancy between student expectations and opportunities for realising these expectations.

Bean's (1985) drop out model suggests that academic, social-psychological and environmental factors influence a student's sense of 'fit', their academic performance, their commitment and, consequently, their persistence in a programme, through the processes of selection and socialisation.

Nature of Educational Provision

Additional institutional factors thought to contribute to low rates of student drop out include conventional delivery (as opposed to distance/open learning systems) and institutional type, with 'liberal arts' colleges and universities exhibiting lower rates than technical institutes. These findings indicated that the nature of educational provision was another institutional factor which warranted attention. The analysis of the types of programmes (Chapter 5) offered by WRCP highlighted the rather different nature of educational provision offered by polytechnics in contrast with New Zealand Universities. The majority of WRCP courses were short (one year or less). As a consequence students could not be subjected to the integrating or socialising forces which the major conceptualisations of drop out suggest are important in persistence, for any particular period of time. In addition, the nature of educational provision of polytechnics results in a lack of continuity[2] of student association executive membership. In Universities the students associations are strong socialising forces, organising a raft of social activities for students, providing a physical presence through facilities for recreation and student services and creating a level of politicisation, all of which have strong integrating effects on the student

body. Whilst the situation is changing as more polytechnics offer diploma and degree level programmes, most polytechnic students demonstrate little allegiance to their institution and have a weak sense of 'belonging'. Thus it would seem that integration and socialisation forces may not be as important an influence as the various models developed to account for drop out from Universities might suggest.

However, the validity of comparing the experiences of various overseas institutions with drop out from the polytechnic sector in New Zealand has been questioned earlier.

West et al (1987) criticise the validity of drop out data generally produced by education institutions, claiming that these crude figures hide more than they expose. A shift to a more student-centred approach in drop out research is evidenced in a trend to identify drop outs and persisters into a greater number of categories in order to develop clearer interpretations and better understanding, as suggested by Tinto (1975). Various criteria were employed in this study to categorise students ranging from the study programmes and school, the style and timing of dropping out, demographic characteristics, type of attendance and their self-reported reasons for leaving.

Although the overall withdrawal rates for both years were similar, the disaggregation of data by student types did reveal some interesting differences in drop out within the institution which are discussed in the following section.

7.1.2   Drop Out Patterns Within the Institution

7.1.2.1   Differential Drop Out Rates Between Programmes

Why certain programmes evidenced higher withdrawal than generally found across the Polytechnic was a critical question posed by the results of the WRCP case study.

Research conducted by Jones (1978) and the Polyview Taskforce (1984) referred to differential rates between programmes and began to examine the notion that perhaps the difference between a student's previous study experiences and the nature of the delivery experienced at higher education institutions was a key factor in drop out. This may account for differences in WRCP drop out rates between programmes within departments (also evidenced by Phythian & Clements, 1982) and across the institution (as described by the Polyview Teaching & Learning Taskforce, 1984). It also helps to explain individual differences, for example, why first timers were more likely to withdraw from their study programmes (Boshier, 1969; Polyview Taskforce, 1984), and to account for Jones' (1978) findings, that students who performed well in the first year of their study were more likely to persist and re-enrol in subsequent years of their programme.

This notion is consistent with the two major conceptualisations of drop out provided by the 'investment' and 'integration' theories. The lack of commitment which results in drop out arises from students not being socialised or selected to 'fit' in according to Bean's (1985) model, or similarly, from a lack of academic or social 'integration' according to Tinto 1975). If there is a big gap between the Polytechnic's learning environment and that of previous study experiences, there may be difficulties in making the adjustment, of becoming integrated, of 'fitting' in.

'Formal' Programmes

Certainly previous studies (Hooper, 1988) have identified that vocational award courses make greater demands of students than other courses, possibly accounting for the higher withdrawal rates evidenced by 'Formal' programmes. While course-related reasons were on average the third most commonly cited by leaving students (after "lack of time" and employment opportunities), these were more often given by part timers than by their full time counterparts. Whilst student responses were not able to be accurately differentiated by programme type[3] and were, thus, inconclusive, academic reasons featured highly in tutors' perceptions of why students left 'Formal' programmes of study, adding some measure of support to this explanation. Further support appears to be provided from a follow up study by Hooper (1989) which evidenced a relationship between the timing of drop out and major assessment dates, suggesting that the rigour of assessment procedures required by recognised qualifications may have been a contributing factor in the 'demand' posed by 'Formal' programmes. The pressure tutors are under to complete prescribed curricular within the time frame allocated may have added yet another factor, resulting in many drop outs in Hooper's (1988) study reporting their courses as less interesting than they had expected.

The 'integration' and most of the 'investment' theories assume that drop out is the product of a 'cost/benefit' analysis in which the rewards of studying are weighed up against the costs. In 'Formal' programmes 'costs' may include the time commitment to prepare for and complete assessment tasks, possibly at the expense of family or social life. This argument helps to explain the differences in perceptions between students and staff reasons for withdrawing. Application of these theories to the problem of high drop out rates from 'Formal' programmes suggests that the provision of counselling to tailor expectations about student life and to assist with time management and study skill development may enhance persistence.

Introductory, Foundation and First Level TOP Programmes

Why was it that many of the programmes with particularly high rates of withdrawal were found to be foundation or introductory courses or first level TOP Programmes? Students who are new to tertiary study may drop out as a result of difficulties in adjusting to the culture and expectations

of higher education, according to Boshier (1969). This explanation is consistent with the need for integration/socialisation to enhance persistence, as already described. The high rate of drop out from introductory programmes was consistent with the findings of previous researchers, Garrison (1985) and Smith (1987), and suggested a lack of academic preparedness (West, 1985, a) and inadequate socialisation procedures (Bean, 1985). Additionally students targeted for TOP programmes appear to have "many personal/social problems which manifest in a range of learning difficulties" according to one tutor, a member of the equity committee. This aspect reinforces Bean's (1985) argument that selection is an important consideration in the conceptualisation of drop out. Student support services must clearly be directed to those 'at risk' students in first level programmes. It appears the learning support needs for TOP students in particular are significant and not yet accurately targeted. However, the problem is not that simple.

Hibbett (1986) remarked on the 'pessimistic attitude' evidenced by many drop outs, something she attributed to a history of educational underachieving but of concern because it made it difficult for students to succeed in their present course. An association between motivation and drop out has been established by many writers, notably Boshier (1973). Boshier argues that although students can be categorised according to their motivation to participate, reasons for dropping out do not reside exclusively within the participant and he suggests that administrators consider the motivations (needs) of students when organising educational experiences for adults.

7.1.2.2   Polytechnic Schools Have Different Drop Out Rates

There was no apparent linkage of these 'high risk' programmes with any particular administrative unit or school, although three (Arts, Management and Community & Health) evidenced higher than average withdrawal rates over both years of the study - why was this? The results from Management and Arts appear to support the notion of a relationship between participation and withdrawal rates: in terms of EFTS, they were the largest schools. However, this did not account for the higher withdrawal numbers from the School of Community & Health. Higher drop out in this school seemed to be associated with a relatively high incidence of part time enrolments (particularly in 1992) and high proportion of women students evidenced in that much smaller school. What were the factors associated with these groups which lead to a high incidence of drop out?

Tinto's (1975) notion that drop out is the result of a lack of 'integration' into the academic and social systems of polytechnic campus life, may account for the relatively high number of part time withdrawals from the School of Community & Health, where part timers join with full time students on modules which are components of full time programmes. These students may have

found the conflict between study and other responsibilities unresolvable, as mentioned earlier - possibly their motivations and commitments to study are somehow different, as suggested by Boshier (1973), Schell & Thornton (1985), and supported by Programme Coordinators perspectives in the WRCP study. This explanation is supported by the decrease in withdrawals evidenced in 1993, when the 'mix' of school participants changed: as a result of their acceptance of more full timers, fewer places were available to part time students, and although the school grew by about 7.25% the number of withdrawals were shown to be reduced over the 1992 figure.

Is there something different in the way the school operates in relation to these groups? The key process of 'integration' and socialisation indicated by the major conceptualisations of drop out suggest selection, orientation and support as aspects which warrant further exploration.

Like Community & Health, the School of Management had also modularised its programmes as advocated by NZQA, an approach known to facilitate greater part-time involvement in programmes leading to 'Formal' qualifications. Thus, similar explanations may also be applicable to the School of Management (SOM), which was the only school to evidence increased drop out numbers in the second year of this study. However, full time and part time drop out rates from Management programmes were found to be similar, suggesting that the larger size of the School was the critical factor here as it had been previously with the Arts Department.

Indeed, high drop out rates may be associated with periods of rapid growth within a school when staffing and physical resources are often stretched to meet the increased demands posed by larger intakes of students. One senior manager maintained that taking in larger numbers resulted in a 'lower calibre' of student and subsequently, higher drop out.

Work by various drop out theorists (Bean, 1985; Tinto, 1975) would seem to suggest that socialisation/integration into courses rather than course ownership is the critical aspect underlying the differential drop out between schools evidenced at WRCP. Many course characteristics are known to influence drop out, including the intrinsic difficulties of subject matter, course design and the amount and quality of support given to students.

It has been suggested that award courses might have higher withdrawal rates, but most schools at WRCP offer programmes which would fall into this category (WRCP had 59 NZQA approved programmes and 72 'Formal' courses of study leading to qualifications by the end of 1993 according to its information booklet) so this did not seem to be a factor in the differential school drop out, although it may warrant further investigation intra-school.

The longitudinal study conducted by de Rome and Wieneke (1982) suggested that certain subjects were more likely to enrol students who had a propensity to withdraw. As noted previously WRCP found students studying in the arts area had a higher than average withdrawal rate. In contrast, the Polyview Teaching & Learning Task Force, (1984) found a lower overall drop out rate from the art department compared to other departments. These contradictory findings may be a function of definition, in that the 'Arts' department at WRCP focuses on fine arts, crafts and design, whereas art subjects in other institutions refer more broadly to the humanities.

These findings also suggest that the higher withdrawal rate associated with certain subject schools is a function of some factors other than just the nature of the subject itself. The fact that larger schools evidenced higher withdrawals of both full and part-time students suggests that there may be a critical ratio between administrative support and numbers of students, particularly where both large numbers and a diverse range of students and staff are under the umbrella of a single school. The Arts department at WRCP was found to have the greatest number of foreign students and very few staff of New Zealand extraction, which some people thought may have contributed to a lack of 'fit' or difficulties in student 'integration' leading to the higher than average drop out experienced by this school in 1992. However, the HOS noted that feedback sought from the students on this issue did not support this view. It appears that most students value the international flavour of the department and are more concerned with the skills of the tutor than their ethnic origin.

Of particular interest in the WRCP study was the substantial reduction in drop outs from the arts area following the split of the large department into two schools. Was this merely a function of size, of the effective span of control of one administrator? Or, did the appointment of the new Head of the School Fine Arts, an American sculptor of international repute, in some as yet unclear way influence drop out? It will be interesting to see whether drop out from the School of Management is reduced following the proposed restructuring in 1994, as this outcome may give a greater understanding of relationships between schools and student drop out.

Technical/conceptual mix and experiences at school are other aspects which previous researchers suggest may also be factors associated with subject drop out correlations. Of particular interest was Jones' (1978) work on the experiences of school compared to University, which focused on the unique aspects of Arts courses, and of students attracted to them. This aspect may be a fruitful area for further investigation.

7.1.2.3   Timing of Withdrawal

When are Students Most Likely to Withdraw?
The three peak pattern of withdrawal was variously attributed by WRCP staff to either the operation of the refund policy or to the programme cycle of activities and assessments.

Woodley & Parlett (1993) maintain that most drop out occurs before the first assessment of a course but the high internal assessment component of most WRCP courses made this relationship difficult to investigate.

Chickering & Hannah (cited in Bean & Metzner, 1985) comment that the true proportion of students leaving institutions is often not known. They maintain that drop out rates seem low because most students leave quietly between terms without talking either to tutors or counsellors. They just do not come back. Their findings imply that more frequent "breaks" may result in greater attrition. Timing of attrition from WRCP requires further investigation, particularly as the Polytechnic plans to review the structure of its academic year in response to recently announced proposals[4] for primary and secondary schools to move from a three to a four term year. If the Polytechnic continues with its present policy of maintaining similar vacations as primary schools, this will mean the introduction of an additional break in the academic year for some students, another opportunity for reflection, for a weighing up of the value and costs of study.

There may have been financial incentives to withdraw early in a programme because of the Polytechnic's refund policy, supporting Kember's (1990) view that a 'cost/benefit' analysis occurs prior to a decision to leave a programme. Many other polytechnics have 'tighter' refund policies (six weeks as opposed to WRCP's 11) and inter-institutional comparisons of the pattern of withdrawal might clarify the effects of these.

The three peaks appeared to correspond to the commencement of courses of different lengths (year, semester and termly programmes), suggesting that most students left early in their programme. Thus, it was thought that the notion of 'fit' between the student and the institution may also provide an explanation for this pattern. Different types of institutions have different public images and, therefore, appeal to different types of students. Students are likely to withdraw early if they find that the programme they have enroled in does not suit them or does not live up to the image portrayed through promotional material. This notion was supported by the fact that "course not as expected" and "time" problems evidenced early leaving patterns in the WRCP study. This explanation is supported by various drop out writers, notably Heist, McConnell, Matsler & Williams (cited in Pantages & Creedon, 1978), who found that a student's chances of persisting were enhanced where the educational goals of the student were compatible with the educational philosophy and the orientation of an institution.

However, Bean (1985) suggests that institutional 'fit' results from socialisation, not selection, and hence suggests that 'fit' increases the longer the longer the student is at the institution. Wanganui drop out patterns were consistent with this notion, revealing that most drop out occurred early in the programme. Early leaving had been identified as a particular form of drop

out by many, previous researchers, but notably Willett & Singer (1991), who highlighted the importance of identifying the precise time when students are at risk of dropping out, so that institutions can more effectively target their prevention strategies.

West et al (1987) suggest that certain factors are identified with particular periods in a programme cycle; early withdrawers predominantly cited reasons associated with academic preparedness, the course and the institution, whereas finance and job-related reasons became more important beyond the first year. Whilst the Wanganui study evidenced a correlation between course and time-related problems and early withdrawers somewhat in line with West et al's findings, other factors, such as the 'pull' of an attractive job opportunity were found to operate in a more or less consistent way over the entire academic year. "Personal/health" related reasons for leaving were also cited quite regularly over both years of the study. However, these findings may be attributable to the lack of differentiation in the WRCP study between first year, second year and students studying in subsequent years - previous research (Bean, 1985, and Clark, 1989) showed that first years were more likely to withdraw than those completing subsequent years of study, a finding congruent with Tinto's notion of 'integration' and persistence.

7.1.2.4 The Style of Dropping Out

There were many 'styles' of dropping out and the one chosen probably reflected the students' assessment of the costs and benefits or rewards of continuing studying. The notion of rewards which emerged strongly from the 'investment' theories, such as that put forward by Bean (1980) and Schell & Thornton (1985) were included in later adaptations of Tinto's (1975) model.

For example, Kember's (1989) adaptation differentiated commitment in a different way from the earlier Tinto model, identifying extrinsic and intrinsic motivation, related to the types of rewards the student might accrue through studying. According to Kember, extrinsic motivation accrues from rewards such as salary increases or increased opportunity for employment or promotion, on completion of the qualification. Intrinsic motivation is concerned with students' interest in the subject matter or content and, as such, is affected by the relevance of the course to the students' interests and career. This differentiation, together with the students' peculiar background and characteristics, is helpful in understanding why students appear to respond differently to apparently similar situations. A change in tutors, for example, may result in a less interesting delivery of the content of that particular module but the student who 'needs' the qualification may, after due consideration, decide to put up with the problem (that is to persist), to transfer to another institution with 'better' tutors or to 'stop out', taking a break of study, but planning to return at a later date. In contrast, the intrinsically motivated student may decide to 'drop down', reducing their study load by withdrawing from that module while persevering with the others in their programme. Where a student is doing a full time programme, the addition of

yet another 'cost' may be enough to tip the balance in favour of complete withdrawal, especially if there is still a chance (because it is relatively early in the programme) to get a refund.

One of the most significant findings from the WRCP study was that not all students who left did so officially. Many students merely ceased to attend classes forming a 'hidden' component of the drop out picture at WRCP. Why was this? It appeared that this was also related to 'cost/ benefit' analysis in that only students who thought they were eligible for refunds completed withdrawal forms, supporting the notion that the annual three peak pattern of withdrawals was closely associated with the operation of the refund policy.

Central to Tinto's (1975) model is the notion that an individual's perception of reality has real effects on them. The background and personality of the student, thus, probably influence their perceptions of the 'costs' and benefits of studying, but also their ability to deal with problems, to persist under adversity. These factors, amongst others, may affect whether a student leaves early or later in the programme. Attrition is probably a measure of the late drop outs, those who left after their eligibility for a refund had expired.

Most WRCP schools were found to have some student loss due to attrition from 'Formal' programmes. The School of Agriculture/Horticulture, whilst evidencing low official withdrawal, was found to have particularly high attrition over both years of the study. Why did one particular school consistently evidence such high attrition? This low number of drop outs completing official withdrawal procedures may have occurred because the School of Agriculture/Horticulture is located at a geographically distant site from the main campus which houses the administration section "it was just not worth the effort" going over there, one Head of School observed. It was noted earlier, that there appeared to be a positive correlation between the size of the administrative unit (estimated by EFTS) and the level of drop out from schools. However, Panos & Astin (cited in Pantages & Creedon, 1978) suggest that it is the spread, not merely the size, which is the underlying factor: "... the more time it takes to get from one place to another on campus, the greater the rate of attrition", they argue (1968, 77). Further investigation revealed that many of the schools evidencing attrition had activities ranging over a number of sites (the Schools of Community & Health and Catering & Hospitality ran 'off campus' programmes as far away as Ohakune and Waiouru; in 1993 Rangahaua increased the range of locations at which to Te Rangakura Maori Teacher Training ran. The School of New Directions activities span several Wanganui sites from the East Town campus to the six local prisons).

High attrition rates may reflect a lack of staff follow up procedures when students were recorded as absent on tutor registers. For whatever reason the official withdrawal process was not completed, this was of some concern to the polytechnic. Completion of official withdrawal procedures provides a last opportunity for student services staff to offer the students support to

deal with problems, should this be appropriate. This poses the question as to the relationship between attrition and ease of access to support mechanisms.

It would seem that a more proactive approach on the part of tutors, when they notice students no longer attending class, might lead to a reduced attrition rate so that even if these students did end up officially withdrawing, they would have had the opportunity to discuss their concerns, to receive assistance if required, and, at the very least, to enable the polytechnic to have a greater understanding of why students drop out.

7.2 The Student

7.2.1   Student Demographic Characteristics

All the major models developed to account for drop out placed the students' background and characteristics first, where there was a linear relationship amongst variables, and highlighted the importance of these factors in influencing the effects of other factors. Student background and characteristics were thought to account for the varying responses (different forms of leaving behaviour/persistence) exhibited in apparently similar situations. This study focused on only a few of the characteristics which could be considered as factors in withdrawal, to find out which students are at risk of dropping out.

The WRCP findings were consistent with previous New Zealand comparative studies, notably by Boshier (1969), and more recently Ostman et al. (1988), which revealed few differences in the background and characteristics of stayers and leavers from higher education. Overall, the withdrawing students differed only a little from the Polytechnic's participation norm in terms of demographic characteristics such as age, gender and ethnicity.

However, higher rates of withdrawal from 'Formal' programmes than from other courses were evidenced, particularly for women, Maori and Pacific Island students and students with disabilities. Why did these students in the 'Formal' programmes demonstrate higher withdrawal rates? Are these students in some way at greater risk of dropping out? And in particular, why did Maori students, who evidenced such low rates across Polytechnic programmes generally, fare so poorly in their completion of 'Formal' programmes?

Ethnicity

The few New Zealand studies which touched on ethnicity (Boshier, 1969, and Ostman et al., 1988) did not support it as a factor in withdrawal. Findings from overseas studies were not

considered because of the uniqueness of the New Zealand situation. Most of these studies considered ethnicity as one of many socio-economic indicators (outside the scope of the present study) which may be associated with drop out.

In this study Maori students were found to have a particularly low drop out rate overall, with only about 2% leaving their programmes prior to completion over both years of study. This was thought to be attributable to the high level of support offered across the Polytechnic by Rangahaua (the School of Maori Studies). Support was also thought to be a factor in the low rate of drop out amongst overseas students (WRCP employs an Overseas Students Liaison Officer and English Language tutors to assist foreign students) and in the lower than expected participation and persistence rates of students of Pacific Island extraction (the withdrawal of Ministry of Education equity funding for a Pacific Island Liaison Officer, employed for a period of 6 months in 1992 may have contributed to this), although there was no data to substantiate this theory.

Whilst Maori students in 'Formal' programmes had a higher drop out rate than that evidenced by Maori across the Polytechnic generally, those enroled in programmes under the auspices of Rangahaua were less likely to drop out than Maori students in programmes in other schools. The notion of 'fit' offers insight into the higher Maori drop out from 'Formal' programmes. Bean (1985) maintains that selection and recruitment procedures are about 'fit', suggesting that if the student joined a programme in which the social backgrounds of other students resembled their own social background, then the likelihood of persistence was enhanced.

The highest number of drop outs from within Rangahaua occurred from the Te Kopae (12) and Te Rangakura (7) programmes in the last year of this study. These are both programmes holding NZQA approval and accreditation. Te Kopae is a year long total immersion course designed for people wishing to improve their fluency in Te Reo and gain a deeper understanding of Tikanga a Iwi. Te Rangakura is a three year bilingual/bicultural teaching training programme towards the Diploma of Teaching. There are no academic prerequisites for entry to either of these programmes, and, thus, many of the (largely) mature participants require a great deal of support. Whilst this is expected (and provided) the much higher drop out rate in 1993 from these programmes appeared to be associated with the fact that Rangahaua ran the Te Rangakura programme at a number of off campus venues (Taranaki and Opotiki) as well as in Wanganui for the first time that year. This drop out rate may reflect the stretched staffing resources resulting from the travel associated with inducting and moderating the activities of newly appointed teachers in these off campus sites, and the inability, therefore, of tutors to give the same amount of time and attention to individual students. Students on the programmes offered off campus would probably not feel as 'integrated' into the social and academic environments of the polytechnic, according to Tinto's (1975) explanation of drop out. ·

The particularly high drop out of Maori students from 'Formal' programmes in 1993 would seem to suggest that further monitoring is required in order to identify the particular factors operating off campus. In particular, it is suggested that further research be undertaken into the learning environment and teaching styles used in 'Formal' programmes to ascertain how these could be changed to better respond to the learning needs and learning styles of Maori, and other groups who evidence higher than average withdrawal rates from 'Formal' programmes.

Age

Previous researchers (Woodley & McIntosh, 1977) found that older drop outs were more likely to record health problems and difficulties with their course, but less likely to cite financial reasons for leaving. Problems associated with care of children, care of other dependants and other domestic demands and not enough time for study were more important in middle years. Thus, the 'costs' of studying and possibly the rewards or motivations for studying, appeared to be different for different age categories.

According to Kennedy & Powell (1976), Huberman's (1974) conceptualisation of adult development as a series of identifiable stages, appears to provide an explanation of why different age groups evidenced different motivations to study. It would seem that this notion could account for both the age participation and the age drop out patterns evident at WRCP. Students aged under 30 formed a predominant proportion of the student population and this was thought to be a probable consequence of the unemployment profile (30% of those unemployed are aged between 20-24 years of age) and the relative mobility of young people. By way of illustrating the latter point, "out of town" students were found to make up more than 40% of all full time enrolments at WRCP.

These younger students are in the "focusing one's life" stage, seeking a social identity through job, marriage and a place in the community, Huberman says. When unemployment is high, the result of this study would indicate that many people of this age group seek training as a way of enhancing their job prospects. In addition the Polytechnic is really a self contained community, able to provide opportunities to meet other people (staff and students and members of the wider community) both through programme activities, informally in a social way, or possibly through taking on a more structured role, for example, as class representative, member of the Student Association or of one of the Polytechnic standing committees such as the Council, the Academic Board, or Programme and Advisory Liaison Committees. Thus, participation in programmes at the Polytechnic would seem to assist people in this age group, to meet their goals.

The 30-40 age group is a period of "collecting one's energies", a stable period of growth in skill and experience with child rearing a major preoccupation. During this stage, Huberman maintains, participation in education is concerned largely with vocational courses, although there is a heightened interest in group activities and experiential forms of education. The latter idea appears to be supported by the WRCP study findings. Members of this age group have a sizable representation (forming about one fifth) of the total student population, although evidencing a consistently high drop out rate over both years of the study. Students' self reported reasons suggest conflicts between study and work or family responsibilities are important factors in the decision for withdrawers from people of this age group. Students aged between 30 and 40 made up less than 10% of the total (part time and full time) population in 'Formal' programmes and a lower proportion of them were full time participants across all programmes. These findings suggest that students in their thirties are more likely to attend part time and, while some are studying in vocational courses, most participate in 'Community and General' programmes. The few full time participants in 'Formal' programmes from this group are likely to have been unemployed, or made redundant, and seeking retraining.

The 40-50 age group are "exerting and assuring" themselves, Huberman claims. Women, no longer tied to children, are able to spend more time on themselves, with large numbers undertaking new careers. A growing number of men attempt a career shift at this life stage. The majority of WRCP students in this age category study part time but, in contrast to Huberman's theory, their focus appears strongly in the 'Community and General', rather than the more vocationally oriented 'Formal' programmes. However, these Ministry of Education programme categories do not accurately reflect programme types. Arts programmes leading to nationally recognised qualifications are included in the 'Formal' category and introductory vocational TOP programmes are included in the 'Community and General' category, for example. Thus, it would appear that finer analysis of the programmes by type and age category is required in order to assess the applicability of Huberman's theories relating to the life stage and motivations of this age group.

It must be noted however, that there are other forces at play in determining participation and withdrawal rates in the various age categories, not least of which are changes in government and local body policies which may provide an alternative explanation for the differences noted in these rates for different age categories. Recent changes to government policies on fees and allowances have reduced community education and consequently the participation of white middle class women, whilst encouraging a greater proportion of younger people as full time enrollees in vocationally oriented programmes.

Geographical access or proximity to providers was found to have a direct positive effect on participation rates by Anderson & Darkenwald (1979). Transport problems may also pose a

barrier for continuation in a programme, especially for the older age group, (many younger people cycle) especially since changes to the bus service were introduced in July 1991[5].

The numbers of drop outs involved in the WRCP study were too small to reveal any significant pattern between age and reasons given for leaving, although it did appear that there may be a relationship between the type of programme (community or 'Formal') and drop out rates for different age categories.

Gender

In their identification of the key demographic characteristics of drop outs, Demos (1968) noted that they were likely to be men. Astin (1964), Hibbett (1986), and Hooper (1988) found that women were more likely to withdraw early, but also more likely to complete the course. However, Pantages & Creedon (1978) and Cope & Hannah (1975) found little difference in overall drop out rates of men and women.

Although previous researchers have presented contradictory findings on the question of gender differences in drop out patterns, findings at WRCP indicate a definite trend for women to be more at risk of dropping out. Despite changes to students' financial support and increased course costs which might have been expected to pose greater barriers for women than men, this study found greater participation by women, as both full and part time participants. However, this statistical over-representation disguises the reality that women remain concentrated in a narrow range of traditional areas of study. At WRCP most women were enroled in 'Community and General' education programmes. Women formed a much smaller proportion of students participating in the 'Formal' programmes which offer significant future career and salary prospects. And women's drop out rates were relatively high, particularly from 'Formal' programmes of study.

These participation and drop out patterns were thought to be associated with the primary caregiving role frequently expected of women, a notion supported by the responses of women drop outs, who were much more likely than men, to cite family related reasons for leaving.

Summary

Kember (1990) observes that correlations between background characteristics and course outcomes are low and warns against the use of selection criteria to influence the profile of the overall student population. However, developing pictures of participating and withdrawing populations can be useful in raising awareness of 'at risk' groups amongst student services personnel who are often the students' first line of contact when a problem arises.

Despite the polytechnic's professed commitment to 'open learning' the constraints of national prescriptions in 'Formal' programmes appear to have resulted in a delivery style and learning environment which did not meet the diverse needs of students especially those belonging to minority ethnic groups and women.

7.2.2   Drop Out by Nature of Enrolment: Part Time Versus Full Time

Because full time students generate more funding under the EFTS system, administrators were keen to know whether part timers or full timers were more likely to withdraw.

Part Time Drop Out

Part timers formed the greatest proportion of total withdrawals, a finding congruent with the work of many previous researchers (Jones, 1978; Katz & Barrett, 1972; Knight, 1991; and Tremaine, 1979). A lack of commitment (Schell & Thornton, 1985), a matter of selection and socialisation (Bean, 1985), or 'integration' (Tinto, 1975) into the academic and social environments of the institution were variously put forward by major drop out theorists to account for these findings. Pantages & Creedon (1978) consider that the conflict between the demands of home/work and study was a major factor. Part time students' self-reported reasons for withdrawal showed that "lack of time" or "work overload" were the most commonly given, adding some support to Pantages & Creedon's explanations for this finding.

This notion was also supported by Thomas (1985) who like many others before him, noted the high number of both mature age and part-time students dropping out. Mature students may also experience a conflict between study and family or work commitments, as suggested by Pantages & Creedon. The results from the questionnaire conducted at WRCP would appear to support these views. "Lack of time" and "work overload" were reasons given mainly by part-timers and more frequently by those in the "over 30" age category.

·The course not meeting students' expectations was also a factor strongly associated with the withdrawal of part timers. These students were found to leave early if the programme did not suit them. This could be interpreted as reflecting the difficulty of integrating part time students into campus life, as Tinto's 1975 'integration' model suggests, especially where they form a minority group as they join with full-time students on modules which are components of full-time programmes, as in the School of Management and the School of Community & Health.

Problems associated with time management appear to be almost part of the definition of what it means to be a part-time student. Particularly for women, a group at high risk of dropping out, part-time study often involves the resolution of competing house, partner, children, and work

demands. The researcher's own experience as a part time student suggests that women's own needs come last in the priority of things and study falls by the wayside. People citing time related reasons for leaving presumably recognised early on that the 'costs' of study outweigh the benefits so they tended to withdraw at the beginning of each semester which would seem to give support to this explanation. Full-timers rarely rated the "time clash/overload/work commitments" category or cited "course not as expected" which were the two top ranking reasons given by part-time students, indicating that the nature of enrolment differentiates two quite distinct groups, the 'part-time' and 'full-time' student populations in terms of their motivation, their needs, and their problems.

Alternatively high part time drop out could reflect a lack of 'fit' (Bean, 1985), a consequence of the more limited information available about part-time courses. Most full-time courses were found to have a comprehensive brochure and include a selection interview during which applicants can gain information about the programme and clarify their expectations. However, part-time community programmes generally have a flyer, a sheet of brief information about the course, but in some cases the only information available was that provided by the newspaper advertisement or from the administration personnel who take enquiries and handle enrolments on a first served, first in basis. A similar procedure was found to apply to students wishing to join selected modules from full time programmes, that is to study part time - it appears they are also enroled with little formality on a first come, first in basis. It would therefore, seem reasonable to assume that full timers will be more fully informed than part timers about the nature of their programme and have expectations which match it more closely. This theory to account for the differential drop out rates is supported by West et al, who found that the most significant cluster of problems contributing to drop out were to do with the 'unreal expectations' students have (1987, 48).

Full Time Drop Out

Despite high part time drop out numbers, a comparison with participation revealed that part timers actually had similar or slightly lower rates of drop out than full timers, highlighting the importance of a comparative approach in drop out research. This difference between previous findings and the WRCP study may be a consequence of methodological limitations. There are a number of technical factors which affect the determination of drop out rates and difficulty in establishing participation and drop out numbers posed problems which may have affected the reliability and validity of drop out measurement in this study (noted in Section 4.2.4). It is also pertinent to note that the number of full time withdrawals was actually very low, representing an average of only three from each school in 1992 and 5 in 1993.

However, the drop out rate of full timers from 'Formal' programmes was found to have increased substantially between the two years of study. A number of explanations, related to environmental, institutional and student related factors, present themselves to account for this unexpectedly higher drop out rate for full timers on these programmes. Staff suggested this was due to a more buoyant economy and improved employment opportunities in 1993. This explanation was certainly supported by the writings of Korndörffer (1988) and Weir (1988), who maintain that vocational training provides a holding pattern of work attitudes and skills. Students' responses to the questionnaire appeared to substantiate this view, with employment recorded as the most popular planned destination for leaving students and the offer of an attractive job opportunity as the most frequently cited reason for leaving by full timers, confirming the findings of previous studies (Knight, 1991), that many students leave for personally positive reasons. The second most likely destination of younger full time drop outs was "leaving the district" possibly also associated with greater employment opportunities elsewhere. These findings were similar to those of West et al (1987) who identified that many of the 'early withdrawers' were more likely not to be on the programme or institution of their first choice and to have lacked a real commitment to further study, staying in tertiary education while they sought employment. Tinto's (1975) 'integration' model also identified commitment as a major prerequisite for students' persistence in a programme.

Students leaving to employment could be expected to have strong employment goals, with training seen as a 'stepping stone' towards this end, according to the 'investment' model of drop out (Schell and Thornton, 1985). Course completion would not be seen as an end in itself, by such students.

Studies conducted by Anderson & Darkenwald (1979) and the Polyview Teaching & Learning Task Force (1984) suggest that the length of the course may also be a factor in drop out. Longer courses were found to yield higher drop out rates; shorter courses were thought to be easier for people to organise their time around. At WRCP the majority of full timers are involved in 'Formal' programmes which, by definition, are a minimum of twelve weeks duration suggesting that the length of programmes may also be related to commitment. How much they want a qualification, and how useful they perceive it will be to them, are factors which determine the degree of goal commitment (Woodley and McIntosh, 1977) and, in turn, the student's ability to persist for the duration of the programme.

An alternative explanation for this finding is suggested by another aspect of Tinto's (1975) 'integration' theory of drop out. With the increasing modularisation of full time programmes, as required by NZQA, a lack of academic 'integration' may occur such that full timers (normally socially well integrated) feel the need to withdraw. However, the fact that few full timers indicated course-related reasons for leaving would seem not to support this explanation.

7.2.3   Reasons for Leaving the Programme

Why Do Students Withdraw and Where Do They Go?

Why do students leave their programme before completion? The polytechnic sector survey identified a range of factors as "very important" in the decision to leave their programme prior to completion. In contrast, WRCP withdrawers generally gave a single brief reason for leaving, although the administration manager noted that during the processing of refunds other reasons often emerged.

Whilst the most common responses recorded by students across the polytechnic sector were "living expenses too high" and "attractive job opportunity", WRCP students identified "lack of time" and "work overload" most frequently and there was a huge variance in the relative popularity of other reasons between the two years. Some of these differences in findings may be attributable to the methodologies employed. The polytechnic sector questionnaire offered a large number (21) of fixed options from which to indicate factors considered as very important in the decision to leave ("lack of time" was not one of them) and this format and the way the invitation to participate was worded, may have suggested to respondents that a number of reasons were expected. The WRCP questionnaire used a single open-ended question to elicit information about the reasons for withdrawing, the wording of which, on reflection, may have suggested only a single response was expected.

Pantages & Creedon (1978, 52) suggest that such contradictory findings are a consequence of the homogenising of results and that 'finer discriminations' between drop out categories yields better results and clear interpretation. The disaggregation of drop outs into separate categories and comparison with participation data similarly categorised, did appear to produce more meaningful results in the WRCP study, though this process did result in very small numbers in certain categories. Tremaine's grouping of responses into 'fate', 'foreseeable' and institution-related factors has been selected as a useful categorisation because they are relevant to the kind of assistance which might assist drop out, she says.

Foreseeable

Foreseeable reasons are those which could have been predicted by the student prior to enrolment, for example, the conflict between study and work/home demands. Part timers citing 'time'-related reasons were found to be mostly mature women in the WRCP studies. It has been suggested by a number of writers, most recently Hooper (1989), that students who "lacked time" may also have lacked commitment or ability to cope with the course, a finding consistent with Bartel's' (1985) study of the experiences of drop outs. The autobiographies of drop outs

indicated that taking on study proved to be more demanding than originally expected. However, studying had not been the first priority in the life of many drop outs, Bartel discovered. Woodley & McIntosh (1977) also argued that lack of time may reflect an unwillingness to give up other family and social activities, reflecting students' goal commitment. It will be recalled that commitment was seen as a key aspect in the longitudinal process of 'integration' between the individual and the institution in Tinto's (1975) model. It was also a primary outcome in Schell & Thornton's (1985) 'investment' type model. Other theorists who based their conceptualisation of drop out on the notion of 'investment', Bean & Metzner (1985), argue that the higher withdrawal rate evidenced by older, part time, commuting students results from a lack of socialisation, rather than a lack of time or lack of commitment. Such students experience a comparatively different 'environmental press' than their younger full time residential counterparts, according to Bean & Metzner. They make little use of student services and spend less time with tutors or other students (known socialisation agents), and are more open to influences from the external environment.

Lack of time as a factor in withdrawal is, thus, revealed as a very complex reason, whose meaning for the drop out is not fully understood and may vary between individuals. Foreseeable reasons, then, are often associated with the students themselves. More indepth study of this factor in the withdrawal process from the perspective of the student is obviously required in order that WRCP administrators can reduce student drop out - this may require better tailoring of students' expectations of the demands of tertiary study, the provision of better induction procedures for part time students and access to support mechanisms for those identified at risk, so they can better resolve the inevitable conflicts between study and their other responsibilities as they arise.

Fate

Although only a few of the major models developed to account for drop out incorporated the influence of environmental factors, previous research in New Zealand Polytechnics (Ostman et al., 1988; Polyview Task Force, 1984) found circumstantial reasons beyond the control of the respondent ('fate') to be most commonly cited for leaving. The polytechnic wide survey findings were similar with "attractive job opportunities" the second most frequently selected individual factor in the decision to leave and personal reasons including "family illness or obligation" and "personal illness or accident", as the second most frequently selected category of reasons (after academic) for deciding to leave the polytechnic. Of the five most frequently cited reasons for dropping out in the WRCP study, three (health reasons, personal/family reasons and the offer of an attractive employment opportunity) were attributed to external reasons beyond the control of the polytechnic. Whilst the source of these factors is external, these reasons implicate the polytechnic's student support services as a factor in drop out - is the provision of health care, counselling, job placement and other student support services adequate?

The results of the WRCP questionnaire showed women were more likely than men to cite "family" related reasons for leaving and to record "domestic" as their planned destination, not surprising when the traditional role of women as primary caregivers is considered. The apparent relationship between drop out due to family and personal illness and the weather, evidenced by both seasonal and annual variations over the two years of study, requires further monitoring to substantiate. The establishment of such correlations, whilst not implying causality, can be useful to Student Services staff in targeting support - the winter months may be a vulnerable period for 'at risk' mature women students, especially full timers and those enroled in 'Formal' programmes of study. WRCP's 'free soup'[6] offered to students over the winter is one example of a seasonal strategy aimed at enhancing attendance (and long term persistence) on cold, bleak days.

Full timers were more likely than part timers to cite "attractive job opportunity" as their reason for leaving and this was found to be a factor over the entire academic year but predominantly for the younger (under 30) women students. Students leaving the district were also found to be younger full timers. Both withdrawers' planned destinations and their reasons for leaving the programme identified employment as by far the most popular response with an increase noted in 1993. This corresponded with data recorded by students completing 'Formal' programmes, which also showed an increase into employment in the second year of study, suggesting this was a general trend for all student leavers whether they left during or at the completion of a programme. The apparent association between economic conditions and drop out patterns suggested by WRCP staff warrants further investigation.

Further training was the second most popular planned destination for both withdrawers and 'Formal' programme completers. A range of continuing study options, either at some other institution or at WRCP was indicated. The availability of real alternatives can have an important influence on drop out according to Schell & Thornton's 'investment' model. Their 'investment' model incorporates a notion that declining educational rewards increased programme 'costs' or the availability of attractive alternatives, can lead to reduced programme commitment, and, because of the direct influence of commitment on drop out, to withdrawal from the programme. What was not clear from the WRCP data, however, was whether students who gave other reasons for leaving intended to return to study when conditions became more favourable (ie. stop outs) or whether they were permanent drop outs from the tertiary education system.

Indeed, the Polytechnic had no method for tracking temporary discontinuance of any type, including transferring students, those on arranged exchanges with other institutions, or those with approved leave of absence due to pregnancy, or other extenuating circumstances, who plan to return to complete their qualification at some later date. The Polytechnic's MIS also had no way of differentiating 'drop down' where students reduced their study load by withdrawing

from one or more modules in their programme of study. This study's 'within year' approach to drop out was seen as being a limiting factor in this regard.

Whether dropping out or leaving at the completion of their programme of study, a sizable proportion of students of both genders did not know what their future plans were. This finding would seem to support the idea of introducing career counselling services at WRCP, and in particular the notion of terminal interviews for drop outs (Demos, 1968). Terminal interviews can be used to increase understanding of the factors which contribute to the decision to withdraw, but more importantly can assist students to make a positive transition into the next phase of their lives. Demos found that approximately 10% of the students who were planning to withdraw decided against it as a direct result of discussing with a counsellor. In many instances this was a result of information that changed their mind, such as the availability of financial support. Sometimes students were referred for personal counselling as a result of problems confronting them. The importance of providing counselling for 'at risk' students is supported by many writers (Phythian & Clements, 1982; Taylor et al, 1986; Ostman et al, 1988; Hooper, 1989) as one strategy to try and prevent drop out, or at least reduce the personal pain of the process. Pervin (cited by Johnes, 1990) highlighted the depression and lack of self esteem which many students who failed to complete their course experienced, whatever their reasons for withdrawing. Although there was no indication of such feelings from the students' own responses, similar observations were reported by the WRCP Student Loans Officer. Counselling offers students an opportunity to work through guilt and the sense of failure frequently associated with drop out as well as providing students with informed choices for future options. As dissatisfied customers are known to talk to between 20 and 30 people (Gedye, 1992), the provision of such services could be considered by the Polytechnic as part of its marketing strategy, as an investment in the continued credibility of WRCP as a quality education provider.

Financial Reasons for Withdrawal: The Impact of Current Changes in the Funding of Tertiary Study on Drop Out

Only some of the more recent 'investment' models (Bean, 1985; Schell & Thornton, 1989) specifically included finances as a factor in student drop out, possibly because other theorists were studying in a different economic environment. Despite far ranging and radical changes to student fees and allowances, resulting either directly or indirectly from government's implementation of far right monetarist theories to the tertiary education sector, few students identified financial reasons for leaving in the WRCP study (only four in 1993 and eight in 1992). These small numbers would appear to support the conclusion that lack of finance is not a major factor in drop out (Johnes, 1990, Roberts et al, 1991). However, results of the polytechnic sector-wide questionnaire and media comment by the Association of Polytechnics' Student

Union (APSU) on the effect of changes in Government financial support on student drop out suggest there may be increasing financial pressures for students to withdraw. Publicity on both a national and local level about students unable to complete their courses because of lack of finances indicated an apparent 'mismatch' in terms of the WRCP survey results and 'bigger picture' events. The differences between the polytechnic sector-wide results and the findings at WRCP may reflect the high quality of student support services at the polytechnic, a service which includes the provision of financial counselling, a hardship fund, and a job placement service.

Local businesses support the Wanganui Polytechnic by the provision of 50 one thousand dollar student scholarships annually. Astin (1975) found that such forms of financial aid facilitated persistence whereas reliance on loans was associated with decreased persistence. Pantages & Creedon (1978) reported that it was the psychological impact, rather than the economic benefits, which elicited participation amongst scholarship recipients, suggesting that smaller grants to larger numbers of students should be considered by WRCP.

The students' chances of completion were also found to be significantly influenced by the type and extent of employment undertaken concurrently with study. The inability of students to get sufficient part time or holiday work was indicated as one of the most important reasons for deciding to leave the polytechnic by a significant number of respondents in the polytechnic sector wide survey. Surprisingly Astin found that having a job usually increased the chance of course completion if employment was less than 25 hours per week (above this figure employment was found to be associated with increased drop out chances). On campus work was preferable to off campus work, possibly because this resulted in increased involvement and greater 'integration' (Tinto, 1975) with the institution, although the relevance of the work to the students long term career interests was not found to be important. This information is important to the effective funding of WRCP's student job search division - staff must take care to procure placements which enhance persistence and avoid those which may lead to a risk of dropping out.

Participation in institution-initiated work study programmes was also found to enhance student persistence especially amongst students from middle income families, women, and 'blacks' (Astin, 1975). Thus, it would appear that WRCP would be well advised to investigate the possibility of mounting such schemes as one strategy which may reduce drop out amongst women students and possibly those of ethnic minorities.

Astin (1964) reported on the apparent relationship between parents' level of education and the degree of financial support provided - less educated parents were found to be less willing to spend money on education than educated parents of comparable family incomes. Receiving

financial support from parents or spouse was found to enhance the ability of students to complete, Astin's (1975) study found. Bean & Metzner (1985) observed that it was the older, rather than younger, students who, increasingly, were raising financial concerns. This finding is supported by Cremieux & Johnes (1993) who noted that, although student poverty is rare, older married students, students living off campus and overseas students were most likely to feel extreme financial hardship. Recent changes have "worsened the financial position of students", Cremieux & Johnes (1993, 27) claim. Because student status lasts only a few years, the 'financial stringencies' faced by individuals are temporary in nature, they explain, and hence student poverty rarely attracts attention. In New Zealand most of the evidence is anecdotal (as illustrated by newspaper clippings, and Student Services staff commentary), but there are good reasons to suspect that student financial hardship is real. The polytechnic wide sector survey found that the most frequently rated individual reason for leaving the polytechnic was that living expenses were too high; the costs of daily travel were also considered high by many respondents. Despite the availability of the student loan scheme and the provision of hardship grants at most polytechnics, "fees cannot be paid" also featured relatively often as the most important reason for leaving. Hard data on the incidence of poverty, the factors influencing students' decisions to take out loans, and the financial barriers to continuing study is required. This conclusion is supported by Roberts et al (1991) who observed that students are beginning to feel the financial burdens of study.

However, it may be that, as Cope & Hannah (1975) suggest, finances are more of a barrier to starting a programme, or in continuing from year to year, than in dropping out within a year. The decline in numbers enrolling across the whole polytechnic sector (NZUSA, 1992) appeared related to the introduction of education 'reforms' and although numbers are now increasing again, numbers have not yet reached 1989 levels again, suggesting that the changes in student support and fee increases pose barriers to participation. Whilst a telephone survey conducted by WRCP's marketing manager to follow up non-enrolling enquirers, did not provide support for this notion, it did appear that the nature of the Polytechnic's population profile has changed, and is still changing, as a result of reduced levels of student financial support and increased fees: students tend to be younger, increasingly full time and more likely to be enroled in 'Formal', than 'Community and General', programmes.

Tinto (1982) explains that while much of the impact of finances occurs at the point of entry into the education system, (influencing the decision to attend and the selection of a specific institution), the effect of finances on dropping out may be long term and indirect in character, part of the general weighing of the perceived costs and benefits of continued attendance. Tinto maintains that when students' experiences are positive, they are more likely to accept greater financial burdens in order to continue attendance than when experiences have been unsatisfactory. For this reason Tinto argues that finances are more likely to cause students to drop out early in the programme, when the goal of completion appears quite distant.

Interestingly Astin's (1975) study found that drop out was higher than expected where fees were low, because students who pay a greater share of the cost value their education more. Astin's results do not agree with APSU's contention that course costs are an obstacle in completing their programme. Some degree of financial investment or sacrifice was the motivation that kept students studying, Astin argues.

Once the investment has been made, the higher costs associated with tertiary study may indeed, increase a student's commitment to study - and the highly committed students are those most likely to persist, according to Schell & Thornton (1985). They found that those who stay in programmes are not necessarily the most satisfied, a finding consistent with feedback from course completers at WRCP[7], many of whom were critical of aspects of educational delivery at the polytechnic. This explanation links in with the theory proposed by Tinto (1985) and elaborated by Roberts et al (1991), that drop out results from a 'cost/benefit' analysis during which a student weighs up the costs associated with study (such as financial stress) against perceived benefits (such as enhanced employment opportunities and a sense of achievement). It is suggested that WRCP reconsider its enrolment procedures because each enrolment presents a 'cost/benefit' situation, which could well result in withdrawal. The current practice is for full time students to re-enrol at the beginning of every year and, for some courses, twice during the year (each semester). Enrolments for successive years in a programme might more beneficially be initiated at the end of the year, at the time of notification of successful completion, when the perceived benefits must appear higher. Alternatively, WRCP could consider a system which students enroled for the entire programme only once, merely paying their fees annually and registering for options/majors with the head of school or programme coordinator as the situation arose, but avoiding the complex and time consuming process of annual enrolment.

Institutional Factors

Kennedy & Powell found that while most drop outs reported external or circumstantial reasons for withdrawal, they "often have a demoralising history of educational failure and bring feelings of insecurity, and educational and intellectual inferiority to their studies". No only must the student learn new vocabularies, they must also "learn to debate and communicate in a manner which is acceptable to the academic community (1976, 69). This insight reflects the notion of academic 'integration' put forward by Tinto's (1975) drop out model as one of the major requirements for persistence in a course.

Whilst course related aspects did not rate highly amongst full timers' self-reported reasons for leaving in the WRCP study, programme coordinators gave academic reasons most often in their perceptions of why particular students left the programmes which they oversaw. The higher

responses in the "time" and "course not as expected" category of students' own reasons for withdrawing clearly highlight a greater need on the part of Polytechnic staff to tailor students' expectations. Polytechnic staff need to match more closely student needs with the reality of tertiary study, with what programmes can offer, and to avoid the marketing hype which can easily pervade polytechnic promotion in this age of cut-throat competition for EFTS. This was identified as particularly important for part time students.

Results of the polytechnic sector-wide questionnaire suggest that academic and course-related factors could play a much greater part in withdrawal decisions than polytechnics had previously envisaged. In this survey the "academic" category had the highest number of responses featuring as "very important" in the decision to leave the polytechnic, with course content "too difficult", "lack of interest in the course content", "a difficulty with skills required" and "overall workload too great" ranking in the top eight most commonly selected factors. Indeed, 47% of respondents to a survey conducted at Christchurch Polytechnic (Polyview et al., 1984) suggested that the most important reasons for dropping out are related to those things which a polytechnic staff do have control over (too much, too hard, difficulties in completing enrolments, poor class atmosphere, comfort, and teaching and evaluation methods). Boshier (1973) maintains that external situational variables are best seen as contributing to drop out rather than directly causing it. "One might be willing to tolerate a boring teacher for all sorts of reasons, but to do so with two sick children and a bad cold may simply be asking too much," Darkenwald (1981) explains (in Polyview Teaching and Learning Taskforce, 1984). Indeed, Darkenwald (op. cit.) maintains that 'course dissatisfaction' is the best single predictor of drop out from adult education classes. This notion is supported by Neumann & Neumann (1993) who found that there were two determinants of educational outcomes: student satisfaction with the programme and student achievement. However, little work appears to have been done on critical satisfaction factors in education - on course dissatisfaction and its possible relationship to student drop out. It would appear that it is important to determine the students' reasons for studying and their expectations of both the programme and student services at the time of enrolment, in order that any differences between reality and expectations can be exposed. Monitoring students' motivations and level of satisfaction over the duration of their programme of study, as Birch (1975) did, may reveal relationships between changes in these aspects and particular types of drop out behaviour.

Drop Out as a Complex Process, Influenced by many Factors

Many writers claim that 'fate' and 'foreseeable' reasons do not reflect 'true' withdrawal factors as defined by Tinto (1975). These students' self-reported reasons are considered socially acceptable attributions (Knight, 1991) as many of the problems reported as reasons for leaving are shared by those who persist (Hackman & Dysinger, 1970). This notion would appear to be supported by the differing perspectives of WRCP staff, and withdrawers' self-reported reasons

for leaving. West et al's (1987) work on reasons for studying and drop out, would seem to suggest that many of those who withdrew from WRCP may not have held course completion as a goal - for those (mainly full timers) leaving WRCP for employment, for example, attendance at the Polytechnic may have been regarded as a 'fill in' whilst waiting for the right job to come along. This view is supported by the results of the polytechnic sector wide survey in which "attractive job opportunity" as the second most frequently cited individual reason in the decision to leave.

Astin (1975) maintains that many fate and foreseeable reasons are handy rationalisations to account for drop out because of difficulties experienced with the course or poor performance, explaining why few full timers recorded reasons associated with their programme as reasons for leaving. It is imperative that more indepth interviewing, as recommended by Shedvin (1985) occurs to ascertain more honest feedback (West, 1985, a) particularly on the part which academic and other institution-related factors play in drop out, as this is one area which the Polytechnic can address in order to enhance course completion rates. In particular, following up student groups already identified as 'at risk' of dropping out, to ascertain their problems and concerns before they become major precipitating factors in withdrawal would appear to be valuable in this regard.   Whilst reasons given for dropping out in this and previous studies can be regarded as variously blaming the students (lack of ability, poor performance, lack of motivation or inability to deal with accidents of 'fate') or the institution (workload, assessment procedures, inflexibility of the course, quality of teaching or of staff/student interaction), Thomas (1985) maintains that a significant percentage of students dropping out may not represent either personal failure or a breakdown of institutional support mechanisms. For some students, dropping out is a measure of the success of higher education in bringing people to assess their values and objectives and to explore alternatives and career options. This notion would seem to be supported by both the WRCP study and the polytechnic sector wide survey which found that a large majority of students left to go to employment or further training.

Academic reasons featured highly in the polytechnic sector wide survey and in tutors perceptions of students' reasons for leaving 'Formal' programmes of study at WRCP, somewhat in contrast with student self-reported reasons as noted previously. Few withdrawers cited financial reasons for leaving, once again in contrast with the perception of Student Services staff who highlighted this as an important factor in the decision of many students to drop out. These differences may be attributable to the particular methodologies used (known limitations of questionnaires in eliciting personally sensitive and revealing information from respondents were highlighted by the WRCP Administration Managers' comments).

While the significance of these different perspectives warrants further investigation, it also suggests the complexity of the drop out phenomenon. Because of the brevity of students' responses to questionnaires, but also because they reflect notions of what is considered

acceptable, reasons given by students for leaving in previous studies have tended to give the impression that drop out results from a single cause, Schedvin (1985) argues. Both the WRCP study and the polytechnic sector wide survey would seem to support the findings of many previous researchers (notably Woodley & Parlett, 1983) which suggest that the decision to withdraw is a complex process influenced by the interaction of many factors. Cookson (1989) explains that the reasons given for withdrawal reflect the depth of the questions asked, and Thomas (1985) adds that considerable commitment is necessary on the part of the researcher to establish 'real' reasons for withdrawal. Demos is in agreement, noting that questionnaires or short interviews, whilst useful in identifying factors for further research, "cannot tap the complex reasons and motivations" (1968, 85) involved in drop out. Student attitudes are often ambivalent and this makes it extremely difficult to determine the actual reasons for dropping out, he explains.

7.3 Summary

Findings from the study appeared to support the notion of drop out as a complex process, influenced by many factors, key being those associated with the student, the institution and the environment.

Whilst many of the models put forward to portray the relationship of the factors thought to be involved in drop out did not take account of environmental influences, this study supported Powell et al's (1990) inclusion of this category of variables in their 'multi-variate framework' model. Changes in the operating environment of polytechnics resulted in administrative restructuring, in alterations to the range of programmes offered and in changes to the student population. New funding arrangements for tertiary study were seen to have resulted in increased fees and changed financial support for students. Whilst administrators at WRCP were concerned that increased financial pressures for students would result in increased drop out, this did not appear to be the case. Few WRCP students attributed their withdrawal to factors associated with financial hardship though staff perceptions and the inter-polytechnic survey results presented views somewhat at variance from this.

Powell et al's model made clear the antecedent nature of students' background and characteristics, and this was useful in accounting for the different forms of leaving behaviour and different reasons for leaving. Overall, withdrawers were found to differ little from participants in terms of the demographic characteristics selected for study, though finer analysis of data by student type indicated high rates of withdrawal from 'Formal' programmes, for women and ethnic minorities. Consideration of life stages and societal roles was found to be useful in explaining age patterns and gender differences in drop out. In particular, full time and part time

students were found to be clearly differentiated groups in terms of their needs, problems and reasons for leaving. The implications of these findings for WRCP policy are developed further in the next chapter.

Institutional factors were commonly identified in drop out models as key influences. The implications of differential drop out rates observed within WRCP, both between programmes and amongst schools, are further explored in the next section.

The 'integration' theories focussed particularly on the effects of institutional characteristics in determining the integration (and hence, persistence) of students. Because of the shorter length of courses generally offered at polytechnics and the high number of part time and commuting participants, naturally occuring opportunities for integration were fewer in polytechnics than at residential universities, where much of the earlier drop out research appeared to have been conducted. However, application of elements of both the 'integration' and 'investment' theories (the latter highlighting selection and socialisation as factors) suggest strategies which may be able to be applied to reduce drop out from polytechnics. These ideas are further developed as specific recommendations in the next chapter.

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[1] Attrition from community programmes was not able to be identified but it appears likely that such a loss would occur, suggesting that the 'real' community education drop out rates are higher than recorded here.

[2] According to WRCP Student Association Administration Officer, Carol Reid.

[3] Refund applications asked for the programme or module title and there were some difficulties in differentiating and categorising the latter from the information given by students.

[4] Example of school vacations under the new proposals were cited in the 1st February Gazette, 1995.

[5] Prior to July 1991, bus services in Wanganui were provided by Greyhound Buses Ltd, and some subsidy was received to maintain the services from the district council. With changes in transport legislation, the subsidy was removed and Regional Council tendered out this transport package to a local taxi company. According to Annette Oldfield, Transport Planning Officer for the Manawatu-Wanganui Regional Council this change has not affected the level of services in Wanganui.

[6] The Student Services Manager initiated this strategy to respond to the alarming number of students she perceived as suffering serious financial hardships after changes to student fees and allowances policies in 1992.

[7] Source: Annual ('Formal') Programme Evaluation Report Data

CHAPTER 8:

CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

8.1 The Conclusion

Changes in the funding of tertiary education gave rise to WRCP administrators' concerns about the long term viability of their organisation. A level of drop out had already been identified by the Polytechnic and this was of concern because of the associated loss of revenue. Other indirect costs were already evident including wastage of materials and staff time and the possible long term effects which drop out may have on the reputation of the institution. Administrators were worried that the drop out 'problem' would grow as a result of fee increases and changes to government financial support for students. This study responded to the needs of WRCP administrators to establish the nature and extent of drop out.

The Extent of Drop Out

Official drop out rates established from refund data appeared to be very low, but the findings from the study conducted at WRCP indicate that it cannot afford to be complacent about this. The lack of differentiation between temporary withdrawers who plan to return, those reducing their study load, transferring students and permanent drop outs may have contributed to some overestimation of the WRCP drop out rate. However, evidence of TOP withdrawal and attrition from 'Formal' programmes suggest that the overall drop out may well have been significantly higher than originally thought.

Drop out rates are frequently suggested as useful indicators of an institution's performance, but the case study conducted at Wanganui Regional Community Polytechnic has shown some of the limitations of these crude measures. By themselves, these data provide little information about experiences which may have contributed to a student's decision to leave.

Drop out statistics do not take into account qualitative aspects such as whether the decision to withdraw was a 'good' or 'bad' decision (after West et al 1987). Combining quantitative data with qualitative data through the gaining of student and staff perspectives on both the reasons for leaving and timing of withdrawal was required to gain a better understanding of the drop out process. Even so a number of questions were raised by these data which could not be adequately explained - why certain programmes and schools had higher drop out rates than others, for example, requires follow up study of a different nature.

The disaggregation of drop outs into separate categories (by demographic characteristics and type of enrolment) and comparison with participation data similarly categorised, did appear to produce more meaningful results in the WRCP study.

These comparisons revealed some differences which may indicate the presence of barriers both to participation and persistence for some student groups, because "...drop out and persistence are both reflections of the functioning of the higher educational system..." (Tinto 1982, 693). For example, the 40 plus age category evidence a lower participation rate than expected from the Wanganui population profile, but also form the highest proportion of all drop outs. This view is congruent with that of Boshier (1973, 256) who regards drop out as "in some ways an extension of non-participation" noting that variables associated with one are associated with the other. In addition to providing a monitor of progress in achieving the Polytechnic's Charter goal of equity, such data can also provide useful background information for marketing purposes, enabling poorly represented groups to be better targeted. They can be used by Polytechnic administrators to target potential 'at risk' groups for special attention and support. Targeted provision, for example of learning assistance, leads to more effective use of scarce resources than general provision of student support services.

Nature of Drop Out

Drop out was found to vary according to a number of factors related both to the institution and the individual. Full and part time drop out rates were found to be fairly similar over both years, but it became clear from the reasons students gave for leaving that this categorisation differentiated two quite distinct groups in terms of their motivations, their needs and their problems.

Students enroled in 'Formal' programmes also appeared to be a distinct group, attracting a greater proportion of younger people who, Huberman (1974) asserts, are seeking a social identity through job, marriage and a place in the community. This notion appeared to be supported by the fact the predominant reason given by leaving full timers (who formed the majority of 'Formal' course participants) was to take up employment. This finding may also indicate that not all students enter study programmes with the same goals - some want to complete a qualification, but for others, the gaining of employment is their primary objective. Both types of students are attracted to vocationally orientated 'Formal' programmes. Higher drop out rates were noted from 'Formal' programmes and this was attributed to the 'award' aspect of this categorisation. 'Formal' programmes must follow approved curricula and this lack of flexibility, combined with the assessment requirements, may be factors contributing to this finding. Ethnic minority groups (overseas students, Maori and Pacific Islanders) appeared to be particularly at risk of dropping out from 'Formal' programmes, suggesting the need for further

investigation into the specific learning and support needs of these students. Whilst few full time students at WRCP actually recorded academic reasons for leaving, programme coordinators' perceptions and the results of the polytechnic sector-wide survey suggest that academic factors may play a more important part in the decision to leave than previously thought.

Women appeared to have higher drop out rates than the Polytechnic average. Whilst the reasons women gave for leaving suggest factors outside the sphere of influence of the Polytechnic, greater awareness of the expectations of tertiary study and the provision of tailored support to address the particular problems which women experience may assist in reducing the higher women drop out rate.

Students new to tertiary study, those on introductory level, foundation and TOP programmes, were another group identified at greater risk of dropping out. It appears that such students may experience difficulties in adapting to the culture and expectations of the polytechnic, and targeting of support has been suggested as a way to assist these students. Students with a previous history of dropping out were also thought by previous drop out researchers to be more at risk of dropping out again, unless they receive adequate support, though this aspect was not explored in this particular study.

Access to support was also raised as a possible explanation for programmes which evidenced higher than average drop out rates, including programmes run at geographically distant sites. Support is provided by tutors and programme coordinators, as well as by student services staff. Factors associated with schools, the role of the head of school in motivating students and enhancing persistence, the structure of their programmes and the way they select, induct and support students, were also identified as areas requiring further investigation in order to account for the differential drop out rates observed between schools. Factors associated with the subjects themselves did not appear to influence drop out in the WRCP study, though the conceptual/technical mix, particularly differences between the way a subject is presented in a polytechnic compared to previous experiences at school, may be.

Attrition was higher in some programmes and schools than others. When students leave without officially informing the Polytechnic this is of concern because there is then no opportunity to offer assistance or advice, should this be seen as appropriate.

The pattern of withdrawal over the academic year appeared to reflect very well the notion of 'cost/benefit' analysis suggested by both the 'investment' and 'integration' theories. Students experiencing problems with the conflicting demands of work or home and study for example, or finding the programme did not match their expectations, appeared to leave early in the programme, whilst they could still get a refund. Thus, it would seem that the '3 peak' pattern of

withdrawals reflects the 'refund eligibility' phases associated with the commencement of programmes of varying lengths.

From this study, it would appear that the impact of the refund policy on early withdrawal requires further investigation. There is concern that it may force students into a premature cost benefit analysis before they have had a chance to become integrated into campus life. This view would be supported by Kember (1989, drawing on Tinto, 1975) who highlights successful integration as a key element in persistence.

However, the nature of the student population (high part time and commuting numbers) and of educational provision (short certificated programmes were in the majority) at WRCP were identified as characteristics of the institution which lessened the influence of integration as a dominant force in drop out. These same institutional characteristics suggested that the influence of external factors might be more important. However, this was difficult to assess, although it did appear that seasonal variations (eg. temperature differentials) and economic factors (the availability of employment) may have had directly measurable effects on drop out patterns.

Whilst many previous researchers have suggested that 'unforeseen circumstances' are blanket excuses covering other problems (Hooper, 1989), this category of reasons remains one of the most important influences in a student's decision to leave. Whilst the Polytechnic has no direct control over external influences, these factors need to be considered in determining the range of student services offered.

Changes in financial support for tertiary study are one aspect of the influence of the environment which WRCP administrators expected were a major influence in drop out. However, from the individual's perspective it appeared that government cuts, resulting in fee increases and reduced student financial support, made no difference to drop out overall. Finances rarely featured in students' self reported reasons for leaving. Indeed, it appeared that students may be less likely to drop out if they are required to make a greater financial contribution, an observation in keeping with the rationale behind Schell & Thornton's (1985) 'investment' model. This model seems to suggest that course commitment becomes stronger as the realisation of the goal (course completion) nears. The evidence of early drop out supports this argument because once students were no longer eligible for a refund they tended to stay until course completion.

Staff and student perspectives on the impact of financial hardship on drop out differed. Staff considered that the effect of finances became more important as the academic year progressed but, they argued, data was not evidenced through official records as most students suffering

financial hardship were beyond the refund eligibility date and thus tended to leave without officially informing the polytechnic. Hardship application requests, which peaked around October annually, provided an element of support for this explanation. The transient nature of the problem of student financial hardship probably contributes to the divergence of opinion between staff and students. Whilst ideas for financial support (scholarships, loans, work/study plans) known to enhance persistence were discussed in the previous chapter, polytechnics also need to work with their student associations to develop quantifiable data on student poverty in order to influence future government policy. The future costs of tertiary education remain a concern to polytechnics, in particular in relation to the effects which government plans for further reductions in the subsidisation of provision have on smaller regional centres. Continued monitoring of the situation is required both from the institution and the students' perspectives.

'Integration' and 'socialisation/selection' were key factors in persistence, according to the major conceptualisations of drop out. Selection was not evidenced as very important in drop out from WRCP. 'Formal' courses with rigorous selection procedures actually had higher drop out rates than other WRCP programmes. There was doubt about the influence of 'integration' because of the unique institutional characteristics of WRCP. However, various elements of the 'integration' and 'investment' models were still useful in providing an explanation for the different drop out patterns observed in the WRCP case study. Whilst integration may not be as strong a force in polytechnics as in universities, particularly those offering residential facilities, it nevertheless appeared to be a factor in drop out for women and for mature and part time students. Socialisation strategies designed to enhance a student's sense of integration, their feeling of belonging may, thus, be considered if the polytechnics wish to reduce drop out.

Marinaccio (1985) adds that developing a 'fit' between the students' expectations and what the institute can offer is also a very important factor in persistence. He advocates a sound marketing approach (involving recruitment for retention, not merely attracting students to come), the development of a good orientation programme for students and the inclusion of student advising and counselling, from admissions through to job placement, as strategies to increase 'fit' and thereby reduce drop out. It would seem that in devising such strategies WRCP needs to explore how they can be targeted to meet the needs of all students, but especially women, Maori and Pacific Island students and those with disabilities. The greater emphasis on career counselling prior to enrolment and academic counselling during the programme is thought to enhance goal commitment, an integral component of Tinto's (1975) model. The idea is supported by other studies (Robert, et al., 1991) which found that goal commitment is a powerful force in determining whether or not a student continues to study and which also highlighted the fact that motivation can change over time (Birch 1975).

In conclusion, finer analysis of quantitative data, complemented by qualitative data from a number of sources, developed a pattern of leaving behaviour associated with a particular institution, WRCP. Such information can be seen to provide a baseline against which any deviations from the norm, such as increasing rates or very high rates can be identified for further investigation. This approach is supported by Woodley & Parlett (1983, 322) who warn against the introduction of a 'casualty ward' approach to drop out problems, supporting measurement and analysis to identify 'at risk' students and individual courses which produce unexpectedly high drop out rates.

Various strategies for reducing drop out have been suggested in this final section, including career and academic counselling and targeted student support. Hore (1985) notes that tighter selection criteria and increased student services have also been advocated by previous researchers, but that few strategies have demonstrated significant capacity to manage the drop out problem. Woodley & Parlett thus argue for further analyses to discover true casual factors before solutions are applied which, while reducing drop out among certain student groups, might have bad knock-on effects for others. This is consistent with the call of Garrison (1987), who stresses the need for a comprehensive approach to drop out research, taking into account all the experiences of learners, both those who stay and those who leave before course completion. In common with previous research, the study at WRCP revealed the increasing complexity of the situation rather than identifying the cause of drop out. "...the reasons for discontinuance are usually complex, overlapping, often have nothing to do with the student, and in some instances may not even be recognised by the student," according to Cope & Hannah (1975, 102). Thus if we are to make progress on the drop out problem we must heed Roberts' (1984, 42) advice. He maintains there is a "very real need" for an analysis of the whole institution's approach and policy towards the drop out problem. He argues for a focus on what the institution can do as a whole to reduce student drop out, irrespective of the particular subject or programme in which a student is enroled. If polytechnics are to maintain credibility as quality education providers they must consider policies to deal with drop out in the context of an institution's wider quality management system, which sees the learner as the primary customer. The researcher considers that customer loyalty, an important indicator of customer satisfaction in a Total Quality Management approach, can be equated with student persistence and retention in tertiary education settings. However, consistent with previous findings (Hibbett, 1986), the WRCP study indicated that some students who complete their programmes were dissatisfied and some who dropped out left for personally positive reasons - they were not necessarily dissatisfied with their programme of study. Thus, to learn more about who drops out, when and why requires an entirely different approach, a more phenomenological methodology designed to gain insights and understanding of the behaviour of leaving students. It requires a longitudinal approach with particular attention paid to the 'wavering persisters', students who had thought of withdrawing but for some reason do not make the break. By this route it is suggested that satisfaction with programmes can be improved and retention increased.

8.2 Implications for WRCP

The following recommendations are logically suggested by the findings from this study.

a) **That WRCP establish a computerised system for the monitoring and analysis of withdrawals,** giving special attention to finances as a factor in drop out.
Information required should include the students' background and characteristics

i) Demographic factors (age, ethnicity, gender and any special learning needs/disabilities)

ii) Academic factors (qualifications on entry, previous academic experiences including secondary school attended and years, highest secondary school qualifications and previous tertiary qualifications)

iii) Students self reported reasons for leaving and whether the student has withdrawn from study on any previous occasion

iv) Commentary by head of school on reason for leaving and level of achievement during the year. This is to differentiate voluntary withdrawal from Polytechnic initiated withdrawal or drop out due to failure.

v) Socio-economic status. This aspect requires further investigation to develop appropriate indicators for polytechnic students. Income and occupation are commonly used, but for school leavers parental SES may need to be applied. Current enrolment procedures require information as to students' occupation at enrolment plus their occupation at 1st October of the last year. This data may well be able to be used, giving some continuity across years.

In implementing the computerised monitoring system, it is suggested that WRCP consider more effective tracking of continuation from year to year in a programme, of 'stop outs', 'drop 'down' and transferring students. This should enable the Polytechnic to better plan for the needs of these students on their return to study. More flexible admission, delivery and support systems will need to be considered as part of this planning.

b) **That indepth exit discussions be held with all withdrawing students.**
Pantages & Creedon (1978) suggest that besides assisting with the identification (and rectification) of underlying academic and institution-related problems, information provided to potential drop outs at such discussions sometimes results in the student being able to continue. Use of a third party to provide more objectivity should be considered by WRCP.

As a result of information derived from exit discussions, (and existing evaluative procedures such as Annual 'Formal' Programme Evaluation Reports and complaints) the Polytechnic may be able to develop a notion of which drop out factors are 'critical'.

c) **That an inter-polytechnic review of withdrawal patterns associated with the refund policies be conducted;**

The notion of 'cost/benefit' analysis, integral to both the 'investment' and 'integration' theories, offered one explanation for the apparent relationship between the pattern of drop out evidenced over the academic year and WRCP refund policies: WRCP refund policies appeared to offer financial incentives to withdraw early. This study suggests that 'tight' refund policies may precipitate withdrawal on the part of students who may have stayed if they were not faced by a cut off date. An inter-polytechnic review of the timing of withdrawal in the context of institutional refund policies is proposed as a way of clarifying any possible links.

d) **That consideration be given to the adoption of a 'recruitment for retention' approach across services and schools.**

Marketing the Polytechnic to prospective students is more than merely attracting them to enrol - students who subsequently drop out because they are unhappy convey dissatisfaction to other students which affects future recruiting. Essential components of such an approach include the availability of career and academic counselling to students pre and post course, as well as during their programme. Counselling provision should be targeted at 'decision-making' periods - on entering a programme, when selection of specialist modules is required or prior to entry into a subsequent year of a programme (after Clark, 1989 and de Rome & Wieneke, 1981).

A 'recruitment for retention' approach would require WRCP to actively tailor 'fit' for students. This will require a survey of student expectations and a reassessment of the polytechnic's programmes and activities in light of identified client needs, while simultaneously ensuring that the parameters of what it can offer are clear. In particular the notion of 'fit' has obvious implications for marketing, student services and the Polytechnic's quality management system, to ensure consistency between 'what we say' and 'what we do', between what is promised/promoted and what is delivered.

e) **That the WRCP management team review existing selection, enrolment and socialisation procedures.**

Selection

Commitment to the course, a major factor in persistence, should be evaluated for inclusion into WRCP selection procedures. At interview, for example, staff could attempt to ascertain the motivation and commitment of course applicants, including when they became interested in the programme, how they got their information, what made them decide on the programme and whether they would stay if an attractive job offer came up.

Segmentation of drop out and destination data for successful students according to goal orientation and commitment should be considered, in order to provide more meaningful decision making. As part of ensuring the best 'fit' between student and programme, applicants should be asked to give their impressions of what it would be like to be a student on the programme, so that any misconceptions can be rectified before the student enrols.

In reviewing selection procedures, cognisance would need to be taken of 'at risk' groups - should affirmative action policies be considered to ensure minority groups have the support of 'critical mass' of peers on the same programme? Should the current policy of allowing part timers to enrol with little formality be perpetuated?

Enrolment

A re-evaluation of enrolment timing and procedures also needs to be conducted in order to reduce the number of situations which may precipitate drop out as a result of 'cost/ benefit' analysis.

Socialisation

Selection and orientation appeared to be the most universally implemented socialisation procedures across the schools. Bean (1985) found that socialisation rather than selection had the greatest influence on academic achievement and therefore on retention. However, selection procedures are known to be useful in tailoring expectations, establishing early relationships with staff. However, most part timers are not involved in these, part time students being accepted on a first in, first on basis. 'Group' information sharing sessions for part timers could be considered as one way of assisting with socialisation.

Orientation procedures should also include strategies aimed to enhance the socialisation of students into tertiary study. It is recommended that orientation include sessions where students' expectations can be shaped to match the reality of tertiary studies, whilst at the same time ensuring that the support services are both known and appear accessible. It is particularly important that students at high risk of dropping out be targeted for inclusion in activities known to integrate students into the life of the polytechnic and that a proactive approach by student support staff be taken to provide such students with special assistance and support very early in their programme. The Polyview Teaching and Learning Taskforce (1984) also recommends the incorporation of group building into courses, regardless of course content, as a strategy which assists with student integration.

f) **That the staff of departments and programmes with consistently low drop out rates be encouraged to share their methods with others**

The Polyview Teaching and Learning Taskforce, (1984) suggests that a polytechnic should learn from its own successes by sharing ideas to reduce drop out. At WRCP several student groups were identified with high persistence rates and discovering what factors contribute to their success is required in order for the Polytechnic to learn from this.

g) **That teachers of first year, introductory level and TOP programmes be encouraged to identify and follow up students 'at risk' as part of their normal teaching duties.** Students whose attendance falls off, those who fail to hand in assessments, for example could be considered 'at risk'. West et al. (1987) maintain that inviting such students to discuss their problems, both personal and academic, may prevent drop out as "just knowing that someone cares and wants to help may be sufficient in itself and may encourage such students from dropping out prematurely" (1987, 72).

h) **That the Polytechnic work with the WRCP students association to**
i) determine an appropriate methodology for further investigating the extent of any financial hardship for WRCP students,
ii) provide continued monitoring of the effects of government changes to tertiary funding
iii) to review the current system of financial support (hardship grants and scholarships) in light of overseas research which suggests certain kinds of support enhance persistence more than others.

While these suggestions have been made to enable the polytechnic to develop a greater understanding of drop out, careful monitoring and evaluation of any changes made is required, in order to avoid the kind of 'knock on' effect Woodley & Parlett (1983) warn of. As noted previously (Roberts, 1984), any findings from the implementation of these recommendations need to be considered alongside polytechnic-wide quality policies and procedures. How these ideas can be implemented in a period of financial restraint, when tight Ministry EFTS targets create bottom line funding dilemmas, poses a real challenge to Polytechnic managers.

8.3 Recommendations for Future Research

A number of issues were raised which were beyond the scope of the present study.

Programme coordinators' perspectives on the reasons why students dropped out, for example, would seem to support the notion of motivation as an important factor in drop out - how other factors such as reasons for studying and the level of satisfaction with the course influence motivation over time is an important question which warrants follow up investigation. Higher drop out from first level and 'Formal' programmes, supported by the perspectives of staff, would seem to indicate that academic difficulties and institution-related issues were important factors in drop out from polytechnics, though these did not feature strongly in students' self reported reasons for withdrawing. These findings suggest the need for an entirely different approach, a more phenomenological methodology, designed to gain insights and understandings of the behaviour of leaving students. Such an approach would necessitate the identification of a potential 'at risk' programme, probably a 'Formal' programme at an introductory level, as a case for further study. Selection of a programme which allowed both full time and part time enrolments would allow consideration of the differential effects of institutional factors on the two groups.

Roberts et al (1991) note that while students' characteristics and their goal commitment are largely out of the sphere of influence of the provider, the academic environment and a student's integration are within staff control and thus worthy of further research in order to reduce drop out. They discovered that students who found study irrelevant to their needs were unlikely to persevere. Lack of relevance is just one of many aspects likely to result in student dissatisfaction with the course.

Anderson & Darkenwald (1979) maintain that the most powerful predictor of persistence in adult education is satisfaction with the learning activity. For this reason it is recommended that such a follow up study should focus on reasons for course dissatisfaction as well as investigating in greater depth the reasons for withdrawal. Whilst many factors have been identified as influential in the decision to drop out little research has attempted to come to grips with the actual process of decision making. What is the relationship between the contextual factors and the trigger which leads to withdrawal?

The socialisation of students, and their integration into the academic and social environments of higher educational institutions are important processes according to current theories of drop out. However, the applicability of these processes to the polytechnic sector has been questioned. A degree of trust must be developed in order to investigate these processes further and to enable the identification of problems which may cause students to consider dropping out. This supports the notion of a longitudinal case study as suggested by Jex & Merrill (1962, cited in Pantages & Creedon, 1978). Of special interest will be the 'wavering persisters' - those who

consider withdrawal but decide to stay on. What support or assistance did they receive which changed their minds?

The influence of external factors (such as any changes in fees and allowances) on student persistence, and the effects of the units of learning approach (with part timers joining full time programmes) on integration, and consequently on student drop out is also of interest, as further reductions in the subsidisation of tertiary study are planned and the Ministry of Education is pushing for early implementation of the industry driven National Qualifications Framework.

8.4 Summary

Garrison (1987) advises that it would be wise to gain a clear conceptualisation of the essential character of the drop out phenomenon in specific situations before any attempts to generalise across settings are made.

This research focused on the unique factors relating to drop out from a single polytechnic, Wanganui Regional Community Polytechnic, though the concerns which prompted the study will be familiar to others in the sector. It will be left to those researchers associated with the polytechnic sector to judge whether these findings have application to their own situation, but the responsive approach adopted by the present study can be recommended to those wishing to further their knowledge and understanding of drop out.

Whilst recent changes in the funding of tertiary education did not appear to have resulted in an increase in drop out, as WRCP administrators feared, they have resulted in far reaching effects on both the structure, operation and activities of the polytechnic.

The official drop out rate(s) evidenced at WRCP in the two year study were low by both national and international standards. Whilst the true extent of drop out was estimated to be only slightly higher, the most important findings from the study related to the discovery of significant drop out from particular schools and programmes and amongst particular groups of students. From these patterns factors thought to have a major influence on drop out in the polytechnic have been tentatively identified. Whilst further research is required before any generalisations can be made about drop out from the polytechnic sector, these findings give support to Powell et al's (1990) conceptualisation of drop out as a complex process influenced by a multitude of factors including student background and characteristics on entry, environmental changes and institutional factors.

The notion of 'cost/benefit' analysis, common to both the 'integration' and 'investment' theories, provided a useful framework for examining the impact of drop out at the institutional level as well as facilitating the exploration of drop out from the students' perspective. However, a more hermeneutic approach in further research is clearly required in order to gain greater understanding of the processes which precipitate polytechnic student drop out.

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STUDENT DROP OUT RATES: SUMMARY OF SELECTED OVERSEAS AND NEW ZEALAND STUDIES

Author	Year	Institute	Student Type	Drop Out Rate	Comment
Astin	1964	Multi-institute sampled from 1957. National merit scholarship recipients after enrolling in college	Four year longitudinal study of high aptitude students: freshman to graduate	10.4%	Drop out figures excluded transfers and stop outs
Astin	1975	Multi-institute study [358 two and four year colleges and universities]	Freshman of 1968 followed till graduation four years later	50.4%	Four year longitudinal drop outs, included voluntary withdrawals and those excluded because of failure
Baumgart & Johnstone	1977	Macquarie University	New under-graduate students	40%	
Birch	1975	Royal College of Nursing	Nurse trainees ("pupils") Students (studying towards final registration) Pupils Students	39.2% 28.5% 31.7% 29.30%	} Withdrawal rate } within first 18 } months of learning } } After 3 years - } excludes those who } failed
Boshier	1969	The Department of University Extension, Victoria University	First year extramural students on long (24 session) programmes	22-62%	Those who enrolled but failed to commence study were excluded from the drop out figure
DeRone & Wieneke	1982	University of New South Wales, Australia	First year university students cross-disciplinary	33%	Longitudinal study, multi-variate analysis
Hackman & Dysinger	1970	Three mid-western liberal arts colleges, USA	First year students	18.62%	Student conducted 1964-1965
Hibbett	1986	Luton College of Higher Education	Part-time adult students (less than 6 hours per week) across range of programmes	10% (of this total 53% were from recreational and 47% from award bearing programmes)	Census of entire population: 38% response rate

Author	Year	Institute	Student Type	Drop Out Rate	Comment
Hooper	1988	Massey University	Unsuccessful first year extramural accountancy	58%	Defined success rate as those who withdrew and those who failed.
			First year accountancy drop out	37%	
			First year extramural average	26%	
Johnes	1990	Lancaster University	First year full-time university students	11.5%	'Wastage' focus sample 163 non-graduates and 165 graduates
Jones	1978	University of Auckland	Non-returning first time enrolees, cross disciplinary	"nearly one quarter"	Longitudinal study of 1976 cohort
Katz & Barrett	1972	University of New South Wales	80% of all first years enrolled in 1969	35% FT 62% PT	Longitudinal study conducted over 2½ years
Kennedy & Powell	1976	Open University	Distance education - withdrawing and at-risk students only	NA rate [684 withdrawn, 291 drop down, 236 at risk]	Counsellors reports - actual numbers only - no rates
Knight	1991	Kent University (USA)	Random sample of non-returning university students		20% response rate
Metzner	1989	Public urban university, Indianapolis	Freshmen, commuters (non-residents)	27.9%	(20 stop outs excluded from study, 51% of total freshmen students)
Ostman, Wagner & Barrowclough	1988	New Zealand Technical Institute	NZIM correspondence students	26%	Covers withdrawals/ drop outs over a 2 year period (% is average of respondents and non-respondent rates)
Phythian & Clements	1982	British Open University	Students who withdrew from extramural higher level mathematics courses (1989/1979)	57% fail to successfully complete the course; as approximately 90% of examinees pass, most of this figure must be attributed to drop out	Drop out highest in maths and science areas
Polyview Teaching and Learning Task Force	1984	Christchurch Polytechnic	Non-examination, voluntary, part-time classes (face to face delivery)	28% overall 32% evening class 22% day class	Excluded those who transferred to another programme from sample

Author	Year	Institute	Student Type	Drop Out Rate	Comment
Powell, Conway & Ross	1990	Athabasca University	Newly enrolled distance education students	40%	Successful completion measured by passing first course
Roberts, Boyton, Buete & Dawson	1991	Charles-Sturt University - Riverina	Small sample (36 students) only. Extramural. Heterogenous characteristics. From two programmes (Landscape Drawing and Microbiology for Nurses)	16.6%	Semi-structured interviews conducted at residential school. 94.4% response rate but only 0.86% of total population.
Sheath	1965	University of New England (NSW, Australia)	First year university Second and subsequent year university	33% 15%	Note early drop out higher
Smith	1987	University of Newcastle	First year 'mature age' 21 year open foundation programme part-time students	More than half	
Sweet	1986	Open Learning Institute of Canada	Adults enrolled in courses over three month period in 1982	40%	Longitudinal study over 1982/1983. Non completers
Taylor et al	1986	Allama Iqbal Open University Darling Downs Institute of Advanced Education The Open Learning Institute of British Columbia Tasmanian State Institute of Technology University of the South Pacific	First year extramural university	9.3% 46.5% 67.8% 54.2% 56.2%	Cross-disciplinary, cross-cultural, and multi-institutional study

Author	Year	Institute	Student Type	Drop Out Rate	Comment
Tight	1992	28 Institutes (18 universities and 10 polytechnics)	Part-time post-graduate students across six subject areas	10-40% range across institutes (4% drop out for financial reasons on average; maximum 15% suggested but nearly half respondents said would before drop outs for financial reasons)	
Tremaine	1979	Massey University	Cross-disciplinary extramural students	30%	Limited study to those who withdrew after 31 March deadline for refunds
West, Hore, Bennie, Browne & Kermond	1987	Multi-institutional Australian study: 3 universities, 4 colleges of advanced education (CAE)	Full-time students who had withdrawn	University: 22% first year, but 30% overall CAE: 25% first year, 12% overall	50% response rate from voluntary survey; representativeness unsure, drop downs considered withdrawals
Woodley & Parlett	1983	Open University (UK) Athabasca University (Canada) Open Learning Institute (Canada) National University Extension Association (USA) NK1 School (Norway) The Fern Universitat (West Germany)	First level university students, cross-faculty distance learners	45% 71% 32% 40% 35% 47%	Quoting other sources
Zajkowski	1991	Open Polytechnic of New Zealand	Enquiring extramural students in Business Studies area	Less than half the enquiries proceeded to enrolment. Of those who received the counselling booklet 29%, control 68%	Definition of drop out included those who enrolled but did not complete their course ie failures and those who withdrew before commencing

STUDENTS RECEIVING STUDENT ALLOWANCES BY INSTITUTION TYPE AT 31 JULY 1990

Allowance Type	Secondary Schools		Polytechnics		Colleges of Education		Universities		Private Institutions		TOTAL		
	M	F	M	F	M	F	M	F	M	F	M	F	Total
16-17 years	-	-	473	649	2	29	28	37	1	4	504	719	1223
18-19 years - away from home	15	11	758	1592	141	861	3961	4388	5	22	4880	6874	11754
18-19 years - at home	475	290	1488	2027	83	568	4435	3863	-	5	6481	6753	13234
18-19 years - targeted	200	134	859	1313	70	519	2501	2478	2	10	3632	4454	8086
20 + years - away from home	61	39	1396	2727	477	1482	9733	7711	14	15	11681	11974	23655
20 + years - at home	57	53	516	677	90	272	2912	1881	-	2	3575	2885	6460
Independent Circumstances	16	10	34	90	-	14	34	57			84	171	255
Students with Dependents	13	3	269	184	127	110	378	136	-		787	433	1220
Earning Spouse - Home	1	21	100	660	75	384	184	556	1	-	361	1621	1982
Earning Spouse - Away	-	-	5	47	7	27	11	30	-	-	23	104	127
Couple Allowance	-	-	57	47	26	32	165	102	-	-	248	181	429
Accommodation Benefit	96	54	2731	4947	776	2546	14413	12584	28	43	18044	20174	38218
Accommodation Supplement	-	-	152	299	1	25	95	142	2	5	250	471	721
Transport Allowance	-	-	688	1058	44	286	2218	2022	1	5	2951	3371	6322
Transport Supplement	-	-	479	843	3	59	103	96	-	1	585	999	1584
TOTAL ALLOWANCES	934	615	10005	17160	1922	7214	41171	36083	54	112	54086	61184	115270
Adjustment for more than one allowance	296	188	4480	7736	892	3380	19241	17213	25	58	24934	28575	53509
TOTAL STUDENTS	638	427	5525	9424	1030	3834	21930	18870	29	54	29152	32609	61761

Data for above table taken from the 1990 Ministry of Education Youth and Student Allowance Monitoring Report.

ENROLMENT DATA: PROBLEMS, SOLUTIONS AND LIMITATIONS

Factors in Accessing and Selecting Enrolment Data Used in this Study

Difficulties in establishing the exact number of students enroled in any one year may well have been considered to be one of the major factors contributing to the apparently low drop out rates at WRCP. The Management Information System (MIS) in place at the time of the study could only deliver EFTS totals, as enrolments had their EFTS contributions calculated automatically by the course factors loaded into the programme enrolment system. The EFTS format was rejected as a suitable data format, as it would have masked the part-time/community withdrawal rate[1].

Student enrolment statistics gathered by the Ministry of Education at 31 July were thus used to estimate the Polytechnic's annual student population.

Ministry of Education statistics were selected because data was presented by nationally defined categories (allowing for institute-wide comparisons should other polytechnics be interested in similar research), was accurate and verifiable (certain conditions apply to the validation of enrolments to ensure the integrity of information provided by the Ministry), and it was thought could be relied on for consistency of definition from year to year, though this proved not to be the case. This data was known not to be entire, but at the onset of this study it appeared this data might yield a good approximation of the Polytechnic's annual population - it was assumed that most enrolments for the year would have occurred by this date though this proved subsequently to be a false assumption.

While this was possibly true for full-time enrolments, the cut-off date precluded any third term (community) enrolments, and comparison between Ministry of Education data for 1993 and a manual tally of total enrolments from WRCP's MIS revealed a discrepancy of 1993 enrolments (or 37% error). However, because of the small drop out numbers at WRCP compared to the total population (whatever data source was used to calculate this), this error had little effect on the overall drop out rate. Using the manually derived revised figures for 1993, for example, meant that the drop out rate was reduced from 4.9% (using 31 July data) to an even smaller 3.0%.

The Polytechnic MIS was also found to be unable to deliver data on demographic characteristics of students even though this had been entered into the system from enrolment forms.

Unfortunately the December resignation and immediate departure of the Administration Manager in January of 1993 resulted in loss of access to the 1992 computerised enrolment data. The result was that a manual search of the 5000-odd student files was the only way of retrieving data at the Polytechnic. The decision to replace the existing Polytechnic Administration System (IMS, Hastings) to A-Plus (CPS, Wellington) over 1993 perpetuated the difficulties for the 1993 cohort.

Considerable time and energy was spent by a number of employees at the Polytechnic to try and assist the researcher extract the required information, but the nature of the WRCP MIS (only a partial access package was purchased) and the unique language involved (data flex) meant that this problem was insurmountable.

As a result of the problems encountered it was decided to limit the comparison of leavers to three facets of the WRCP student profile - age, sex, and ethnicity, as these were the only statistics available as institute specific data from the Ministry of Education. Ministry information on the WRCP student population was unfortunately not available in one convenient table. Age and sex data for 'Community and General' participation were available in Ministry publications but the Data Management and Analysis Section[2] of the Ministry of Education had to be contacted to extract the ethnicity for that same population and for the new category "finished before 31 July" introduced 1993. Similarly full-time and part-time, 'Formal' programme data for these three characteristics was provided, on request, from the same source.

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[1] To illustrate point, for example, off campus community enrolments totalled approx. 950 for the 1992 year but this equated to only 20 EFTS.

[2] Acknowledgement is made of the assistance given by Andy Dresmanis (Data Management Unit, Ministry of Education), in eliciting this information often at short notice.

It was assumed that the enrolments which occurred in the 'Community and General' category over the third term, and unaccounted for in July 31 Ministry of Education data, would have been similar in the sex, ethnicity and age profiles as term one and two enrolments, because these profiles were relatively similar to that of the local community and also displayed consistency over the two years of the study.

Although figures were available from the Ministry on the qualifications on entry of full time and part time full year students, and for other characteristics for which information was sought on the 'Formal' enrolment form, the briefer format of the community enrolment form excluded such data and so it seemed to be a pointless exercise to compare, in effect, less than one fifth of the total number of students on these additional characteristics.

Interpretation of Ministry Enrolment Statistics

Nature of attendance is differentiated by the Ministry into three categories: full year, full-time (FY/FT), full year, part-time (FY/PT) and part year, part-time (PY/PT). Each course is assigned a course factor by the Ministry, reflecting its relative proportion of a full-time student year.

A full-time programme of study is defined by the providing institution as the normal pattern of work for a student to complete, in the minimum time, the tertiary education or training programme in which s/he is enrolled. Generally speaking, one EFTS is generated from one full-time student year and the Ministry funding associated with this is based on a minimum of 680 "face to face" tuition hours.

The full year, full-time (FY,FT) Ministry category is interpreted by WRCP central administration to include all students involved in full-time programmes of study, whether they run for two semesters (full year) or one (half year). Full year, part-time (FY,PT) enrolments are those where a student studies regularly every week (for either one or two semesters) in one (or more) module(s). These modules, or units of learning, may comprise a discreet programme of study in their own right, or may be a portion of a longer course. Full year, full-time and full year, part-time enrolments tended to be in courses of study leading to vocationally-oriented qualifications, ie enrolment in 'Formal' programmes.

Part year, part-time (PY,PT) enrolments generally reflect the "Community and General" education participants and their course factors are calculated by the total number of hours which a programme generates, related to the 680 hours/one EFTS equivalent.

Although the Ministry differentiated these three categories of enrolment, and assigned course factors on this basis, the reality for the Polytechnic administration staff was they recognised a simple dichotomy of full-time and part-time enrolments. The 'full-time' category covered both one and two semester full- time students as in the first category described. Part-time students were those in the latter two categories combined, including short full-time courses, seminars and weekend workshops, for interest and personal development (PT/PY) as well as students enrolled in units of learning towards qualifications normally gained through full-time programmes of study (FY/PT).

The custom and practice of WRCP administration staff in defining and interpreting the nature of student enrolments was considered preferable to that of the Ministry because it ensured consistency in approach with withdrawal data (which was not required by the Ministry) and hence reduced the likelihood of errors in categorising refund applications from withdrawing students. The three course categories may appear to be artificial, the remnant of a previous very rigid approach to qualifications which was inconsistent with the New Zealand Qualification Authority's requirement that polytechnics shift to a more flexible learner centred approach.

To calculate the withdrawal rate by nature of attendance required the extraction and collation of part- time and full-time enrolment figures from the Ministry of Education's 'Formal' and 'Community and General' (and in 1993 also from their 'finished before 31 July') categories. These were then compared with the numbers of students identified on the withdrawal form that they were withdrawing from a programme or a module (a unit of learning within a programme). The MIS at WRCP had no reliable mechanisms for ascertaining whether withdrawal from a single module was a partial withdrawal (drop down) from a full-time student or a total withdrawal from a part-time student. This possibly introduced an element of error into the part time withdrawal figures, which may have included students who had not left, but merely reduced their study load.

WANGANUI REGIONAL COMMUNITY POLYTECHNIC

PROGRAMME AND COURSE/MODULE REPORT

This report is for the maintenance of a central record of programmes which will help management decisions to be made. It is required at the end of each programme leading towards a recognised qualification or award as well as full time courses including ACCESS (12 weeks/20 hours per week or more). Additionally schools are encouraged to submit reports on other significant courses. The report should be completed as soon as possible after the end of the course and forwarded to the Associate Director: Education Services. If the report is to be delayed for more than a month after the course finishes, e.g. waiting for external results, please submit an interim report or a note to signal a pending report. It is strongly recommended that you present this report to your advisory group for their comment before submitting to the ERC.

Course Name: _____   School: _____

Code/Number: _____   Credits: _____

Year: _____   Level: _____

Start Date: _____   Finish Date: _____

Total Number of Weeks Course Ran: _____

Average Study Hours per week: _____

Study Hours per programme, course (module):

a) Timetabled teaching   _____

b) Self Directed Component   _____

c) Supervised Study   _____

   Total Study Hours per course   _____

A   **STUDENT INFORMATION**

   Entry Criteria:

   Append information on entry qualifications/achievements if available.

   a) Number of Enquiries: _____   b) Number of Applicants: _____

   c) Number Enroled: _____   d) Number of withdrawals: _____

       Total Maori: _____   Total Maori: _____

       Total Pacific Island: _____   Total Pacific Island: _____

       Total Female: _____   Total Female: _____

Number Passing Relevant Examinations
(where applicable)

Examination	Number Passed	Average Mark	National Pass/ Average Mark

Main Reasons for Non-Completion of Course (if applicable)

_____

_____

_____

_____

Main Destination of Students: (Please survey students at end of course where possible, e.g. employment, further training)

	Number
Employment	
Further Training	
Leaving Area	
Unemployed	

B **COURSE INFORMATION** (Append the following information using the module descriptor as the base document)

1 Course Objectives
2 Course Outline
3 Assessment Procedures
4 Tutors involved in the Course
5 Information on teaching methods used and the relative importance of each.

C **COMMENTS AND SIGNIFICANT ISSUES**

Please include:

i) Your opinion on student ability based on past or national profile characteristics (based on data if available, e.g. standard on entry)

ii) A summary of the results of course evaluation by students (include a copy of the evaluation form)

iii) Recommendations for changes in the course.

WANGANUI REGIONAL COMMUNITY POLYTECHNIC

<div style="border:1px solid black; display:inline-block;">

ANNUAL PROGRAMME REPORT

</div>

This report is for the maintenance of a central record of programmes which will help management decisions to be made. It is required at the end of each programme leading towards a recognised qualification or award as well as full-time courses including Access (12 weeks/20 hours per week or more). Additionally, schools are encouraged to submit reports on other significant courses. The report should be compiled progressively over the year but completed as soon as possible after the end of the course and forwarded to the Associate Director, Academic. **If the report is to be delayed for more than a month after the course finishes eg waiting for external results, please submit an interim report.** It is strongly recommended that you present this report to your advisory group for their comment before submitting it to the Academic Board.

Course Name: _____   School: _____

Start Date: _____   Finish Date: _____

Total Number of Weeks Course Ran: _____

Was this course a day or evening course? _____

1   STUDENT INFORMATION

1.1   Number of Enquiries   _____
        (Student Demand)

(This data may be useful should your school wish to make application for

1.2   Number of Applicants   _____

provision of another stream in future)

1.3   Number Enrolled _____ 1.4   Number of Withdrawals _____

	FT	PT
Total Enrolled		
Number Maori		
Number Pacific Islanders		
Number Women		
Number Disabled		
Age Group < 20		
20-29		
30-39		
40 >		

	FT	PT
Total Withdrawals		
Number Maori		
Number Pacific Islanders		
Number Women		
Number Disabled		
Age Group < 20		
20-29		
30-39		
40 >		

1.5   Reasons for non completion of programme: (give numbers and any comment)

1.6   Success and Destination of Students

	Total Number of Students	Number Maori	Number Pacific Islanders	Number Women	Number Disabled
Into employment					
Into further training					
Completing the programme					
Achieving formally recognised standards (eg numbers passing national exams, numbers fulfilling NZQA approved, internally assessed standards)					
Leaving this area					
Unemployed					

WANGANUI
REGIONAL
COMMUNITY
POLYTECHNIC
KARETI A IWI

11 March 1993

Chris Coutts
Associate Director:
Education Services
C/- Wanganui Regional Community Polytechnic
Private Bag 3020
WANGANUI

Dear Chris

I am pleased to support the study of withdrawing students which you commenced in 1992.

Your findings indicated a greater understanding of both the patterns and reasons for students withdrawing and which areas students were most 'at risk'.

I understand that the ethnographic case study*planned for 1993 will build on this learning, enabling a greater appreciation of this phenomenon.

I expect that recommendations will be made about both teaching delivery and student services in order to improve our own student retention rate.

You have permission to access the management information system and other administration records required as part of your study, on the understanding that individual confidentiality is preserved.

Yours sincerely

John Scott
Director

* (not included in this publication)

WANGANUI
REGIONAL
COMMUNITY
POLYTECHNIC
KARETI A IWI

9 March 1995

To Whom it May Concern, Informed consent

The informal discussions with staff and their commentary on the Withdrawal data recorded in the study, have been approved by those concerned for publication.

I have been consulted about Polytechnic specific data and I give my consent for this study to be made available to readers in Massey Library without conditions.

Yours sincerely

Stephen Town
Chief Executive

mg:letter.2\withdrawal thesis

A DECADE OF QUALITY AND CARING

AOTEAROA POLYTECHNICS STUDENT UNION

APSU PO Box 27359 Wellington 6037   *Telephone (04) 385-3446 Fax (04) 384-3554*

The New Zealand University Students' Association (NZUSA) in association with the Aotearoa Polytechnics Student Union (APSU) is undertaking this survey to determine the reason why students leave polytechnic during the academic year. We would emphasis that your responses are COMPLETELY ANONYMOUS and would ask that you be open and honest with your answers.

FACTORS INFLUENCING WITHDRAWAL

Please state what were the most important reasons for deciding to leave the Polytechnic. Please circle the number which best represents your decision.

		very important	important	not important	For office use only
1.	**Academic**				
	Accepted for a course elsewhere	3	2	1	
	Workload within a particular part of course	3	2	1	
	Overall workload too great	3	2	1	
	Difficulty with skills required	3	2	1	
	Course content too difficult	3	2	1	
	Lack of interest in course content	3	2	1	
	Preferred choice of course prevented by limitation on student numbers	3	2	1	
	Quality of teaching in course	3	2	1	
	Other (please specify and give a rating: _____)	3	2	1	
2.	**Personal**				
	Family illness or obligations	3	2	1	
	Personal illness, accident or disability	3	2	1	
	Pregnancy	3	2	1	
	Relationship problems	3	2	1	
	Emotional or psychological stress	3	2	1	
	Not enjoying student life	3	2	1	
	Sexual or other form of harassment	3	2	1	
	Other (please specify: _____)	3	2	1	
3.	**Financial**				
	Attractive job opportunity	3	2	1	
	Fees cannot be paid	3	2	1	
	Cannot get sufficient part-time/holiday work	3	2	1	
	Living expenses too high	3	2	1	
	Daily travelling expenses too high	3	2	1	

WANGANUI
REGIONAL
COMMUNITY
POLYTECHNIC
KARETI A IWI

Campbell Street
Private Bag 3020
Wanganui
New Zealand
Phone (06) 345 0997
Fax   (06) 345 2263

REPORT TO MANAGEMENT TEAM
Follow up of 16 enquiries following advertising
July 1992 entry

Sixteen people were sent information on programmes through the mail.   Several weeks later they were telephoned to ensure that the information had been received and to offer further assistance.

3   enquirers had already been accepted on to programmes

2   required further information about financial assistance: One subsequently came for an interview with the Head of School and the other asked for part-time course information as well

3   needed to have interviews with the Head of School concerned and these were arranged - a follow up telephone call after the interview was made.   One enjoyed obtaining more information and said it would be easier to apply when ready now she had met the Head of School

2   were interested in programmes next year and were sent further information

1   did not need further information

4   were unobtainable on the phone

Jan Hains

STUDENT WITHDRAWAL FORM

Note: When a student has been absent without a reasonable explanation for five consecutive days, the student is deemed to have left the course and student support payments should cease. The payment may be reinstated if the student is readmitted to the course at a later date.

NAME: _____ STUDENT NO: _____

ADDRESS: _____

_____ TELEPHONE: _____

I wish to apply to withdraw from the class/classes listed below:

CLASS CODE	NAME OF CLASS

My reason for withdrawing from the course(s) is: _____

_____

What are your plans after leaving the programme? (please tick one)

- ☐ To employment
- ☐ To unemployment
- ☐ To further education and training

- ☐ To domestic duties
- ☐ Overseas
- ☐ Not Known

If I am entitled to a refund of fees, please make cheque payable to:

_____

Please cancel the Tertiary Bursary

SIGNED: _____ DATED: _____

For Office Use Only

Letter of resignation received   yes/no

Copy sent to:
- ☐ HOS
- ☐ Student Allowances Officer
- ☐ Other Financial Supporter, e.g. ACC

_____ Accepted by (Clerk)

_____ Deleted from list

_____ Date

_____ W/L Telephoned

Comments: _____

_____

_____

_____

Account Code	Amount
Total Refund Due	$

REASONS FOR LEAVING - DEVELOPING CATEGORIES FOR ENCODING IN THE WRCP QUESTIONNAIRE

Categories for encoding data from the first question evolved over the first year of study from students responses. Many other drop out researchers had developed categories which could have been adapted, but Hughes (1990) is critical of such an approach, arguing that such a method is based on the researcher's hypothetical expectations of their results rather than curiosity.

Developing a system which would allow some basis of comparison with other dropout research, while at the same time being aware of criticism such as that levelled by Hughes, posed a dilemma which was exacerbated by the six category limitations of the Quattro Pro Spreadsheet programme in presenting findings. In the trial analysis (conducted midway through the first year of study) the categories originally selected were:

- to employment
- financial
- time clash/overload
- course not what expected
- health/illness of self
- personal/family problems/commitment

These categories were based on a review of relevant literature, as well as the personal experiences of the student services and administration staff who action withdrawal applications.

A number of problems in coding were identified during this trial and as a result the original questionnaires were revisited and more fine analysis of the data was conducted. This involved the establishment of a student database for each year, with the actual reason (or a summary) entered.

This process allowed double checking of encoded responses, increasing confidence in the reliability of this process. The initial 'trial' of the half year data had proved a guide as to the variety of answers which could be expected from this open ended questionnaire, and in the final analysis of the 1992 data,13 quite different categories emerged:

- personal reasons
- own health
- family illness
- family obligations
- attractive job opportunity
- financial
- time clash/overload
- work commitments
- course not what expected
- course too advanced
- left district
- no reason stated
- other, which included reasons which had only one response recorded.

These reasons were then reviewed to ascertain any commonality and as a result time clash/ overload and work commitments were subsequently grouped together, as they appeared to be related to a common theme of time management. Similarly, on reflection, it seemed that the motivation to withdraw associated with personal reasons, including personal illness or health, was different from that associated with family obligations including health or illness of a family member, and so this data was regrouped. It was considered artificial to cluster together reasons which were not known to be related and as a consequence nine categories were eventually formed, with a decision to select six for display purposes, rather than collapse all the data into six artificial categories in response to the limitations of the software package used.

The categories finally established for use in the study were:

- personal illness
- attractive job opportunity
- financial
- family obligations/illness
- time clash/overload/work commitments
- course not what expected (this included course too advanced and reasons associated with the programme delivery)
- left district
- other
- unknown (when no response given)

SUMMARY OF CERTIFICATED PROGRAMMES OFFERED AT WRCP

Qualification	Title
Agriculture, Certificate in	NZQA
Arts: Certificate in Fine and Applied Arts	NZQA
Arts: Diploma in Fine Arts	NZQA
Arts: National Foundation Studies in the Visual Arts	NZQA
Automotive: National Certificate for entry to Automotive Trades	NZPPC*
Biological Crop Production, Certificate in	NZPPC*
Business: Clerical Retraining Certificate	WRCP
Business: Receptionist Skills Certificate	WRCP
Business: New Zealand Certificate in Office Systems	NZQA
Business: Executive Personal Assistant Certificate (Intermediate)	WRCP
Carpentry, Certificate in Pre-trade	NZQA
Carpentry, Certificate in Intermediate	NZQA
Care: National Rest Homes Programmes: Core & Advanced	NZQA
Care: New Zealand National Nanny Certificate	NZQA
Community Work Certificate	WRCP
Counselling Skills (Basic) Certificate	WRCP
Counselling Skills (Further) Certificate	WRCP
Catering, Certificate in	NZQA
Computing: Information Processing Certificate	WRCP
Computing: Certificate in Business Computing	NZQA
Computing: Advanced Certificate in Business Computing	NZQA
Computing: Computer Engineering Diploma	Under application
Craft: Certificate in Glassblowing & Production	NZQA
Craft: Diploma in Glassblowing & Production	Under application
Craft: Diploma in Ceramic Design & Production	NZQA
Conservation Corps (Youth Affairs) Certificate	NZQA
Design: Bachelor of Graphic Design (Computing)	NZQA
Design: National Diploma Computer Graphic Design	NZQA
Engineering: Introductory Mechanical Engineering Trade Skills Certificate	NZQA
Engineering: Basic Mechanical Engineering Trade Skills Certificate	NZQA
Engineering: NZCE 3 in 1, Electrical and Electronics Certificate	NZQA
Electrical/Electronic, Foundation Certificate in Electronic Technology	NZQA
Fashion Design: Proficiency in Dressmaking Certificate	WRCP
Fashion Design: Certificate in Fashion/Textile Design	NZQA
Fashion Design: Diploma in Fashion/Textile Design	NZQA
Hairdressing, Certificate in Pre-Apprentice	NZQA
Health Services Certificate	WRCP
Horticulture, Advanced Certificate in	NZPPC*
Horticulture, Certificate in	NZPPC*
Horticulture, Diploma in	NZPPC*
Horticulture Technicians Certificate	NZPPC*
Hotel: Cert. in Service Skills for the Hotel, Catering & Hospitality Industry	NZQA
Hotel: Certificate in Hospitality Operations	NZQA
Hotel: Certificate in Hotel Reception	NZQA
Landscaping, Certificate in	NZPPC*
Landscaping, Diploma in	NZPPC*
Management: Supervisory Management Certificate	NZQA
Management: National Certificate in Retailing	NZQA
Management: Diploma of Entrepreneurship	NZPPC
Management: National Certificate in Business Studies	NZQA
Maori Studies: Te Kopae Certificate	WRCP
Maori Studies: Te Rangakura Teacher Training Programme	NZQA
New Directions in Education Certificate	WRCP
Recreation: Certificate in Leisure Studies	NZQA
Recreation: Diploma in Leisure Studies	NZQA
Social Services, Certificate in	NZQA
Social Work, Diploma in	NZQA

NB:

NZQA = Programmes for which New Zealand Qualifications Authority approval and accreditation have been gained

Under application = approval and accreditation have been applied for with NZQA

WRCP = A Wanganui Regional Community Polytechnic Certificate

NZPPC = Programmes for which the New Zealand Polytechnic Programmes Committee under delegation from the New Zealand Qualifications Authority under the provisions of the Education Amendment Act 1990

NZPPC* = Field accreditation for the subject area for which the New Zealand Polytechnic Programmes Committee under delegation from the New Zealand Qualifications Authority under the provisions of the Education Amendment Act 1990

COMMUNITY PROGRAMMES OFFERED AT WRCP

ACTIVE RETIREMENT PROGRAMMES

Art Appreciation
Creative Grandparenting
Creative Writing
Flat Glass
Gardening
Home Handyperson
Oral History
Positive person
Self Massage
Wanganui Architecture
Wanganui Historic Trees
Wanganui River History

AGRICULTURE/HORTICULTURE

Farm Management
Greenhouse and Hydroponics
Home Gardening
Horticultural Business
Horticultural Management
Horticulture - National Diploma
Horticulture - Trade Certificate in
Landscaping
Organic Growing

ART RELATED PROGRAMMES

Art for Beginners
Calligraphy
Computer Graphic Design
Drawing for Pleasure
Feltmaking
Flax Weaving
Framing/Mounting Pictures
Glass Blowing
Hot Glass
Interior Design
Life Drawing
Painting for Pleasure
Papermaking

ART RELATED PROGRAMMES (continued)

Photography as Art
Pottery
Pottery - Special Schools/Workshops
Printmaking
Printmaking - Introduction to
Sculpture
Stained Glass
Typography
Upholstery

CHEF TRAINING AND TOURISM

Restaurant Service NZQA 841
Wine Service NZQA 845
Bar Service NZQA 848

COMMUNITY WORK

Changing Careers
Co-Counselling
Co-Supervision
Communication Skills
Counselling Skills
Dealing with Conflict
Helping Skills
Negotiation and Bargaining Skills
Stress Management
Supervision

COMPUTING

Computerised Accounting
Computing - Introduction to
Database
Desktop Publishing
Operating Systems (MSDOS or UNIX)
Programming in BASIC, PASCAL, COBOL or C
Project Management
Software Applications
Spreadsheet
Wordprocessing

DEMONSTRATION KITCHEN PROGRAMMES

Cake Decorating
Cakes and Pastries
Cooking for the Elderly
Cooking for Men
Cooking for Beginners
Dinner Party Entertaining
Cordon Bleu Cooking
Indian Cooking
International Cooking
Italian Cooking
Microwave Cooking
Vegetarian Cooking

FOR MEN

Assertiveness Training
Going it Alone
Personal Growth Groups

FOR PARENTS

Adolescence
Child Development
P5 Positive Parenting
Parenting Alone
Step Parenting

FOR WOMEN

Assertiveness Training
Carpentry for Women
Going it Alone
Home Handywomen
New Outlook for Women
Personal Growth Groups

Self Defence
Seminars for Rural Women
Wallpapering for Women
Women's Studies
Women's dinner with Guest Speaker

LANGUAGES

Fa'asamoa
French
German
Italian
Maori
Mandarin
Japanese

MANAGEMENT

Accounting for non-accountants
Accounting for Clubs and Societies
Advertising
Communication Skills, AAVA 1040
How to Run a Meeting
Interpersonal Communication
Interviewing Skills
Managing Change
Marketing and Salesmanship
Media Skills
Negotiation Skills
Public Relations Communication
Public Speaking
Selling Yourself
Stress and Time Management
Writing for Pleasure

METALWORK/WOODWORK

Arc Welding - Advanced
Arc Welding - Beginners
Concrete Skills
Engineering - Beginners
Engineering - Extending existing skills
Gas Welding - Advanced
Gas Welding - Beginners
Hand Tools - Introduction to
Woodwork - General (Hobby)

PERSONAL DEVELOPMENT

Assertiveness Training
Helping Skills
P5 Positive Parenting
Positive Person
Psychology - Introductory
Self Awareness
Sociology - Introductory
Stress Management
Working in a Group

SEWING/DRESSMAKING/FASHION

Design Draft and Make
Dressmaking and Tailoring
Dressmaking: for the Experienced Sewer
Embroidery
Machine Knitting
Machine Patchwork
Making the Best Use of your Sewing Machine
Quilted Patchwork
Sewing for Pleasure
Sewing Children's Clothes
Soft Furnishing
Stretch and Sew - Introduction to
Stretch and Sew Pattern Drafting - Advanced
Stretch and Sew Workshop in - Lingerie
                              - Family Underwear
                              - Leisurewear

TECHNICAL

Boatmasters
Car Maintenance - made easy
Car Panelbeating
Electronics - Basic (Hobby)
Electrical - Restricted Registration
Hair Care and Grooming
Home Handyperson
Small Motor Maintenance - mowers etc
Taxidermy

WANGANUI POLYTECHNIC'S STUDENTS ENROLED BY PROGRAMME TYPE - 30 JULY 1992/1993

| | 1992 | | | | | | | | | 1993 | | | | | | | | | | | | |
| | Formal | | | Community and General | | | Total | | | Formal | | | Community and General | | | Finished before 31 July | | | Total | | |
Age	F	P	T	F	P	T	F	P	T	F	P	T	F	P	T	F	P	T	F	P	T
<17	91	34	125	6	411	417	97	445	542	66	31	97	22	495	517	10	69	79	98	595	693
18-19	182	35	217	8	162	170	190	197	387	230	30	260	27	88	115	9	22	31	266	140	406
20-24	163	69	232	14	248	262	177	317	494	175	67	242	13	138	151	13	54	67	201	259	460
25-29	50	52	102	11	258	269	61	310	371	50	42	92	19	146	165	5	54	59	74	242	316
30-34	39	86	125	7	305	312	46	391	437	45	49	94	9	158	167	2	80	82	56	287	343
35-39	31	55	86	3	294	297	34	349	383	44	33	77	10	150	160	2	63	65	56	246	302
>40	31	120	151	1	796	797	32	916	948	52	70	122	17	447	464	7	234	241	76	751	827
Unknown	-	1	1	-	4	4	-	5	5	-	-	-	-	-	-	-	-	-	-	-	-
Total	587	452	1039	50	2478	2528	637	2930	3567	662	322	984	117	1622	1739	48	576	624	827	2520	3347

Key   F = Full time
        P = Part time
        T = Total

Source: Ministry of Education
          Data Management and Analysis Section (unpublished), 6 Janury 1994

CHARACTERISTICS OF POLYTECHNIC STUDENT POPULATION AND OFFICIALLY WITHDRAWING STUDENTS

(A) 1992

	TOTAL STUDENT POPULATION						WITHDRAWALS						WITHDRAWAL RATES (By Category 13)		
	P/T # 1	P/T % 2	F/T # 3	F/T % 4	Total # 5	Total % 6	P/T # 7	P/T % 8	F/T # 9	F/T % 10	Total # 11	Total % 12	P/T %	F/T %	Total %
GENDER															
Men	937	32.0	314	49.3	1251	35.0	31	22.5	13	41.9	44	26.0	3.3	4.1	3.5
Women	1993	68.0	323	50.7	2316	64.9	107	77.5	18	58.1	125	74.0	5.4	5.6	5.4
TOTAL	2930	100.0	637	100.0	3567	100.0	138	100.0	31	100.0	169	100.0	4.7	4.9	4.7
ETHNICITY															
European/Pakeha	1928	65.8	450	70.8	2378	66.7	95	68.8	23	74.2	118	69.8	4.9	5.1	5.0
NZ Maori	355	12.2	123	19.3	478	13.4	7	5.1	2	6.5	9	5.3	2.0	1.6	1.9
Pacific Islander	13	0.4	4	0.6	17	0.5	0	0	0	0	0	0	0	0	0
Asian	16	0.6	7	1.1	23	0.6	1	0.7	0	0	1	0.6	6.3	0	4.4
Overseas	16	0.6	21	19.0	37	1.0	0	0	0	0	0	0	0	0	0
Other	302	10.3	31	4.9	333	9.3	19	13.8	2	6.5	21	12.4	6.3	6.5	6.3
Not stated	300	10.2	1	0.2	301	8.4	16	11.6	4	12.9	20	11.8	5.3	N/A *	6.6
TOTAL	2930	100.00	637	100.00	3567	100.00	138	100.00	31	100.00	169	100.00	4.7	4.9	4.7
AGE															
< 17	445	15.2	97	15.2	542	15.2	3	2.2	3	9.7	6	3.6	0.7	3.1	1.1
18/19	197	6.7	190	29.8	387	10.9	8	5.8	10	32.3	18	10.7	4.1	5.3	4.7
20 - 24	317	10.8	176	27.6	494	12.9	16	11.6	8	25.8	24	14.2	5.0	4.6	4.9
25 - 29	310	10.6	61	9.6	371	10.4	17	12.3	4	12.9	21	12.4	5.2	6.6	5.7
30 - 34	391	13.3	46	7.2	437	12.3	17	12.3	3	9.7	20	11.8	4.3	6.5	4.6
35 - 39	349	11.9	34	5.3	383	10.7	23	16.7	2	6.5	25	14.8	6.6	5.9	6.5
> 40	976	33.3	32	5.0	948	26.6	46	33.3	1	3.2	47	27.8	4.7	3.1	5.0
Not stated	5	0.2	0	0	5	0.1	8	5.8	0	0	8	4.8	N/A *	N/A *	N/A *
TOTAL	2930	100.00	637	100.00	3567	100.00	138	100.00	31	100.00	169	100.00	4.7	4.9	4.7

(B) 1993

	TOTAL STUDENT POPULATION						WITHDRAWALS						WITHDRAWAL RATES (by Category 13)		
	P/T # 1	P/T % 2	F/T # 3	F/T % 4	Total # 5	Total % 6	P/T # 7	P/T % 8	F/T # 9	F/T % 10	Total # 11	Total % 12	P/T %	F/T %	Total %
GENDER															
Men	770	30.6	365	44.1	1135	33.9	31	28.2	17	32.10	48	29.4	4.0	4.7	4.2
Women	1750	69.4	462	55.9	2212	66.1	79	71.8	36	67.9	115	70.1	4.5	7.8	5.2
Sub-Total	2520	100.00	827	100.00	3347	100.00	110	100.00	53	100.00	163	100.00	4.4	6.2	4.9
ETHNICITY															
European/Pakeha	1753	69.6	519	62.7	2272	67.9	90	81.9	33	62.2	123	75.5	5.1	6.4	5.4
NZ Maori	351	13.9	210	25.4	561	16.8	5	4.5	8	15.1	13	8.0	1.4	3.8	2.3
Pacific Islander	12	0.5	6	0.7	18	0.5	0	0	0	0	0	0	0	0	0
Asian	20	0.8	5	0.6	25	0.8	0	0	2	3.8	2	1.2	0	40.0	8.0
Overseas Student	13	0.5	39	4.7	52	1.6	1	0.9	2	3.8	3	1.8	7.7	5.1	5.8
Other	203	8.1	26	3.1	229	6.8	9	8.2	8	15.1	17	10.4	4.4	30.8	7.4
Not stated	168	6.7	22	2.7	190	5.7	5	4.5	0	0	5	3.0	3.0	0	2.6
Sub-Total	2520	100.00	827	100.00	3347	100.00	110	100.00	53	100	163	100.00	4.4	6.4	4.9
AGE															
< 17	595	23.6	98	11.9	693	20.7	2	1.8	1	1.9	3	1.8	0.3	1.0	0.4
18/19	140	5.6	266	32.2	406	12.1	5	4.5	16	30.2	21	12.9	3.6	6.0	5.2
20 - 24	259	10.3	201	24.3	460	13.7	17	15.5	22	41.6	39	23.9	6.6	10.9	8.5
25 - 29	242	9.6	74	9.0	386	10.8	19	17.3	4	7.5	23	14.1	7.9	5.4	6.3
30 - 34	287	11.4	56	6.8	343	10.3	14	12.7	4	7.5	18	11.0	4.9	5.3	5.2
35 - 39	246	9.8	56	6.8	302	9.0	15	13.7	2	3.8	17	10.4	6.1	3.6	5.6
> 40	751	29.8	76	9.2	827	24.7	38	34.5	4	7.5	42	25.9	5.1	5.3	5.1
Sub-Total	2520	100.00	827	100.00	3347	100.00	110	100.00	53	100.00	163	100.00	4.4	6.4	4.1
Unknown					15										
TOTAL					3362										4.9

KEY:
1   Numbers of students enrolled part time by category
3   Numbers of students enrolled full time by category
5   Total numbers of students enrolled by category
7   Numbers of part time students withdrawn by category
9   Numbers of full time students withdrawn by category
11   Total numbers of students withdrawn by category
13   Withdrawal by category as a percentage of total enrolments, by nature of enrolment

2   Part time enrolments by category as a percentage of total part time enrolments
4   Part time enrolments by category as a percentage of total full time enrolments
6   Total students enrolled by category as a percentage of all enrolments
8   Part time students withdrawn by category as a percentage of total full time withdrawals
10   Full time students withdrawn by category as a percentage of total full time withdrawals
12   Total students withdrawn by category as a percentage of all withdrawals
*   There were more non-respondents to the withdrawal questionnaire than from enrolment data

DEMOGRAPHIC CHARACTERISTICS OF PARTICIPANTS AND WITHDRAWERS FROM 'FORMAL' PROGRAMMES

Student Categories		1992		1993	
		Enrolled by Category (n = 781)	Withdrawing By Category * (n = 114)	Enrolled By Category (n =1118)	Withdrawing By Category * (n = 136)
Ethnicity					
Maori	FT	n/a	n/a	235	54
	PT	n/a	n/a	24	1
	T	184	16	259	55
	%	24%	9%	23%	21%
Pacific Island	FT	n/a	n/a	5	1
	PT	n/a	n/a	1	0
	T	6	2	6	1
	%	1%	33%	1%	17%
Gender					
Women	FT	n/a	n/a	512	64
	PT	n/a	n/a	189	10
	T	412	65	701	74
	%	53%	16%	62%	11%
Disabled					
Stating Disability	FT	n/a	n/a	24	6
	PT	n/a	n/a	46	4
	T	17	1	70	10
	%	2%	6%	6%	14%
Age					
< 20	FT	n/a	n/a	302	52
	PT	n/a	n/a	27	4
	T	n/a	n/a	329	56
	%	n/a	n/a	29%	17%
20 - 29	FT	n/a	n/a	220	24
	PT	n/a	n/a	30	4
	T	n/a	n/a	250	28
	%	n/a	n/a	22%	10%
30 - 39	FT	n/a	n/a	65	8
	PT	n/a	n/a	28	3
	T	n/a	n/a	93	11
	%	n/a	n/a	8%	12%
> 40	FT	n/a	n/a	34	5
	PT	n/a	n/a	12	1
	T	n/a	n/a	46	6
	%	n/a	n/a	4%	13%
Unknown		n/a	n/a	409 (37%)	47 (12%)

Key:

FT: Full Time
PT: Part Time
T: Total students enrolled by category
%:   Participation/withdrawal rates

* These percentages record by "category" withdrawal rates ie. the numbers withdrawing in that category against the numbers of participants in that same category.

REFUND DATA BY SCHOOL AND MONTH (1992)

Month	Full/Part Time	Ag/Hort	Maori	Trades	Health	New Dir	Info Syst	Catering	Mgmt	Arts	Staff Dev	Arla	Totals
Jan	Full time				1								1
	Part time												0
Feb	Full time				2		2		2	1			7
	Part time		1	3	5		1	1	7	3			21
Mar	Full time	1		1			1		3	2			8
	Part time		1	1	5		2		6	9	1		25
Apr	Full time		1				1		1				3
	Part time		1	1	1		4		1	5			13
May	Full time			1									1
	Part time			1	3			1	3	6			14
June	Full time		1		1		1		2				6
	Part time			2	10	1	3	1	1	4	2		24
July	Full time						2						2
	Part time				6	1	2		4	3		1	17
August	Full time			1			2						3
	Part time						1		1	5			7
Sept.	Full time												0
	Part time			1	4				1	5			11
October	Full time		1										1
	Part time				1								1
Nov.	Full time												0
	Part time	2								2			4
	Full time												0
Dec.	Part time									1			1
Withdraw Totals	Full time	1 (3%)	3 (10%)	3 (10%)	4 (13%)	0 (0%)	9 (29%)	0 (0%)	8 (26%)	3 (10%)	0 (0%)	0 (0%)	31
	Part time	2 (2%)	3 (2%)	9 (7%)	35 (25%)	2 (2%)	13 (10%)	3 (2%)	24 (18%)	43 (31%)	3 (2%)	1 (0.1%)	138
	Combined	3 (2%)	6 (4%)	12 (7%)	39 (23%)	2 (1%)	22 (13%)	3 (2%)	32 (19%)	46 (27%)	3 (2%)	1 (0.5%)	169
Nos. according to End of Year Reports (FT unless stated)		15	6	11	12	6	16	3	35 (PT & FT)	10	0	0	114
Tops With-Drawal		-	-	-	-	1	5	8	1	-	-	-	-	15
Estimated Attrition		14 (32%)	3 (7%)	7 (16%)	7 (16%)	1 (2%)	0 (0%)	2 (5%)	3 (7%)	7 (16%)	0 (0%)	0 (0%)	44
Revised Drop Out Totals		17 (8%)	9 (4%)	19 (8%)	47 (21%)	8 (4%)	30 (13%)	6 (3%)	35 (15%)	53 (23%)	3 (1%)	1 (0.5%)	228

REFUND DATA BY SCHOOL AND MONTH (1993)

Month	Full/Part Time	Ag/Hort	Maori	Trades	Health	New Dir	Info Syst	Catering	Mgmt	Arts	Staff Dev	Arla	Design	Totals
Jan	Full time				1		1		3					5
	Part time								4					4
Feb	Full time		1	1	2		1		5				4	14
	Part time	1	1	1	3		1	3	6	1	1			18
Mar	Full time		2	1	1			1	1	2			4	12
	Part time	2			1		1		2	1				7
Apr	Full time	1		1				1	3				1	7
	Part time			1	1				4				2	8
May	Full time													0
	Part time	1	1		4		1		4	1			2	14
June	Full time								4				2	6
	Part time			2	4	2	1		7	1	2		3	22
July	Full time					1	3		3			1		8
	Part time	1	2		3				5				2	13
August	Full time	1												1
	Part time				1		1				2		2	6
Sept.	Full time													0
	Part time			2	2		2		2	1	1		2	12
October	Full time													0
	Part time			1					1		1			3
Nov.	Full time													0
	Part time						1						1	2
Dec.	Full time													0
	Part time	1												1
Withdraw Totals	Full time	2 (4%)	3 (6%)	3 (6%)	4 (8%)	1 (2%)	5 (9%)	2 (4%)	19 (36%)	2 (4%)	0 (0%)	1 (2%)	11 (21%)	53
	Part time	6 (6%)	4 (4%)	7 (6%)	19 (17%)	2 (2%)	8 (7%)	3 (3%)	35 (32%)	5 (9%)	7 (6%)	0 (0%)	14 (13%)	110
	Combined	8 (5%)	7 (4%)	10 (9%)	23 (14%)	3 (2%)	13 (8%)	5 (3%)	64 (33%)	7 (4%)	7 (4%)	1 (0.5%)	26 (16%)	163
Nos. according to End of Year Reports	Full time	12	19 *	6	14	11	6	11	22	14	0	0	6	121
	Part time	0	0	4	4	3	0	0	0	0	-	-	4	15
	Combined	12	19	10	18	14	6	11	22	14	-	-	10	136
Tops Withdrawal	-	-	-	-	5	5	2	2	-	-	-	-	-	14
Estimated Attrition		10 (16%)	16 * (26%)	3 (5%)	5 (8%)	6 (10%)	0 (0%)	7 (12%)	3 (5%)	12 (20%)	0 (0%)	0 (0%)	0 (0%)	62
Revised Drop Out Totals & %'s		18 (8%)	23 (10%)	13 (6%)	33 (14%)	14 (6%)	15 (6%)	14 (6%)	57 (24%)	19 (8%)	7 (3%)	1 (0.5%)	25 (11%)	239

- used old forms

PROGRAMMES EXHIBITING DROP OUT RATES OF 15% OR MORE

Course	1992			1993		
	Enrolments	Withdrawals	%	Enrolments	Withdrawals	%
School of Community and Health						
TOPS Positive Action/Trades for Women				16	4	25
Certificate in Social Services	12	3	25 ≈	41	7	17 ≈
NZ National Nanny Certificate	12	4	33 ≈	17	3	18 ≈
School of New Directions In Education						
Volunteer Training	2	1	50 ≈	1	1	100 ≈
Volunteer Training (Advanced)				2	2	100
TOPS Job Search				12	3	25
Te Kopae				38	12	32
School of Trades						
Hairdressing 2nd Qualifying	21	4	19			
NZCE Electrical and Electronics				9	2	22
Pre Trade Carpentry	12	3	33			
Basic Mechanical Engineering Trade Skills				16	3	19
School of Agriculture/Horticulture						
Advanced Certificate Horticulture	15	4	27			
Certificate in Horticulture	10	3	30			
Conservation Corps	15	3	20 ≈	12	4	33 ≈
Certificate in Agriculture	15	4	27			
Horticultural Trainee Technician Certificate	4	1	25 ≈	9	4	44 ≈
Certificate in Biological Crop Production				5	1	20
School of Arts						
Diploma Ceramic Design and Production				6	1	16
National Foundation Art/Craft/Design				37	11	30
Diploma Fine Arts (Year 3)				5	1	20
School of Design						
Diploma Fashion/Textile Design (Year 2)				11	2	18
School of Information Systems						
TOPS Front Office Skills				13	2	15
Reception Skills				13	3	23
Information Processing	19	3	15			
National Certificate in Business Studies	37	20	54 ≈	156	44	28 ≈
Certificate in Business Computing	25	9	36			
Diploma in Leisure Studies *	4	2	75 ≈	15	3	20 ≈
TOPS Small Business Administration	13	3	23			
School of Catering and Hospitality						
Certificate in Service Skills				12	2	17
Hospitality Operations				13	3	23
Certificate in Hotel Reception	10	2	20			
TOPS Retail (September)	14	2	28 ≈	13	2	16 ≈
TOPS Retail (January)				13	2	15 ≈

≈ High drop out rates for two consecutive years
* Name changed from Diploma Adventure Tourism in 1992

REASONS GIVEN BY WITHDRAWING STUDENTS OVER THE YEAR   1992

YEAR/MONTH	FULL/PART TIME	ATTRACTIVE JOB OPPORTUNITY	FINANCIAL	PERSONAL/HEALTH	FAMILY OBLIGATIONS/ILLNESS	TIME CLASH/OVERLOAD/WORK COMMITMENTS	COURSE NOT WHAT EXPECTED	LEFT DISTRICT	OTHER	UNKNOWN	TOTALS
1992 Jan	Full time			1							1
Jan	Part time										0
Feb	Full time	2	2	1	1			1			7
	Part time	2		2	2	6	2	3	1	4	21
March	Full time	2		2	2			1		1	8
	Part time	4	1	1	3	6	4	2		6	26
April	Full time	1	1		1						3
	Part time	2		2	3	1	4	1			13
May	Full time									1	1
	Part time	4	1	2		6		1	1 (transport)		14
June	Full time		1	1	1			1		1	5
	Part time	2	1	4		7	8			2	24
July	Full time			2							2
	Part time	1	1	2	1	6	3	1		3	17
August	Full time	3									3
	Part time			2	2	2				1	7
Sept.	Full time										0
	Part time	1		2	1	3	2	2			11
October	Full time									1	1
	Part time	1									1
Nov.	Full time										0
	Part time			2	1	1					4
Dec.	Full time										0
	Part time			1							1

		#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Totals	Full time	8	26	4	13	7	23	5	16	0	0	0	0	3	10	0	0	4	13	31	18
	Part time	17	12	4	3	20	15	13	9	34	25	23	17	10	7	2	2	15	11	138	82
	Combined	25	15	8	5	27	16	18	11	34	20	23	14	13	8	2	1	19	11	169	100

TOTAL ENROLMENTS 1992: 3,567 (Full-time: 637, Part-time 2,930)

KEY: % shown is number of withdrawals by reason as a percentage of the total withdrawals by nature of enrolments

REASONS GIVEN BY WITHDRAWING STUDENTS OVER THE YEAR , 1993

YEAR/MONTH	FULL/PART TIME	ATTRACTIVE JOB OPPORTUNITY	FINANCIAL	PERSONAL/HEALTH	FAMILY OBLIGATIONS/ILLNESS	TIME CLASH/OVERLOAD/WORK COMMITMENTS	COURSE NOT WHAT EXPECTED	LEFT DISTRICT	OTHER	UNKNOWN	TOTALS
1993 Jan	Full time	1	0	0	0	0	0	4	0	0	5
Jan	Part time	0	0	0	1	2	0	1	0	0	4
Feb	Full time	4	1	0	1	1	0	3	1	3	14
	Part time	2	1	1	1	7	2	0	0	4	18
March	Full time	5	0	1	1	0	2	0	1	2	12
	Part time	0	0	0	0	2	3	0	1	1	7
April	Full time	1	0	0	1	0	1	1	0	3	7
	Part time	1	0	1	0	4	1	0	0	1	8
May	Full time	0	0	0	0	0	0	0	0	0	0
	Part time	0	0	4	1	4	0	3	0	2	14
June	Full time	1	0	1	0	0	0	0	2	2	6
	Part time	3	2	3	1	3	8	1	1	0	22
July	Full time	5	0	0	0	0	1	0	1	1	8
	Part time	5	0	1	0	1	2	1	2	1	13
August	Full time	0	0	1	0	0	0	0	0	0	1
	Part time	0	0	1	0	0	3	2	0	0	8
Sept.	Full time	0	0	0	0	0	0	0	0	0	0
	Part time	1	0	2	0	5	2	1	0	1	12
October	Full time	0	0	0	0	0	0	0	0	0	0
	Part time	0	0	0	1	1	0	0	0	1	3
Nov.	Full time	0	0	0	0	0	0	0	0	0	0
	Part time	1	0	0	0	0	0	0	0	1	2
Dec.	Full time	0	0	0	0	0	0	0	0	0	0
	Part time	0	0	0	0	1	0	0	0	0	1

		#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Totals	Full time	17	32	1	2	3	6	3	6	1	2	4	8	8	16	5	9	11	21	53	33
	Part time	13	12	3	3	13	12	5	5	30	27	21	20	9	8	4	3	12	11	110	68
	Combined	30	18	4	3	16	10	8	5	31	19	25	16	17	10	9	45	23	14	163	100

TOTAL ENROLMENTS 1993: 3,347 (Full-time: 827, Part-time 2,520)

KEY: % shown is number of withdrawals by reason as a percentage of the total withdrawals by nature of enrolments

WANGANUI TEMPERATURES: MONTHLY MEAN TEMPERATURES

	1992		1993	
	Maximum	Minimum	Maximum	Minimum
January	216	142	207	126
February	212	212	216	118
March	185	112	198	114
April	154	082	175	097
May	136	068	160	092
June	132	059	145	079
July	133	068	133	057
August	114	063	131	054
September	136	068	134	074
October	161	090	173	102
November	185	119	167	094
December	197	122	197	125

Data supplied by NZ Meteorological Service for Wanganui.

REASONS FOR LEAVING THE PROGRAMME BY GENDER AND NATURE OF ENROLMENT

REASONS	P/T or F/T	1992 Men #	Men % * (*)	1992 Women #	Women % + (+)	Total #	Total % o	1993 Men #	Men % * (*)	1993 Women #	Women % + (+)	Total #	Total % o
Family illness/obligations	PT	1	(8) 3	12	(92) 11	13	9	0	0	6	(100) 6	6	6
	FT	2	(40) 16	3	(60) 17	6	16	1	(33) 6	2	(67) 6	3	6
	T	3	(16) 7	16	(83) 12	19	11	1	(13) 2	7	(88) 6	8	6
Attractive job opportunity	PT	2	(12) 6	16	(88) 14	17	12	4	(31) 13	9	(69) 11	13	12
	FT	3	(38) 23	6	(63) 28	8	20	6	(35) 36	11	(65) 31	17	32
	T	5	(20) 11	20	(80) 16	25	15	10	(33) 21	20	(67) 17	30	18
Left district	PT	3	(33) 10	6	(67) 6	9	7	4	(44) 13	5	(56) 6	9	6
	FT	2	(67) 16	1	(33) 6	3	10	1	(13) 6	7	(88) 19	8	16
	T	5	(42) 11	7	(58) 6	12	7	5	(27) 10	12	(71) 10	17	10
Personal/illness	PT	5	(26) 16	15	(76) 14	20	15	0	0	13	(100) 17	13	12
	FT	4	(57) 31	3	(43) 17	7	23	0	0	3	(100) 8	3	6
	T	9	(22) 29	18	(67) 14	27	16	0	0	18	(100) 14	18	10
Time related reasons	PT	9	(36) 30	25	(74) 23	34	25	10	(33) 32	20	(67) 25	30	27
	FT	0	0	0	0	0	0	0	0	1	(100) 3	1	2
	T	9	(27) 21	25	(74) 20	34	20	10	(32) 21	21	(68) 18	31	19
Course not as expected	PT	3	(13) 10	20	(87) 19	23	17	8	(62) 26	13	(62) 17	21	19
	FT	0	0	0	0	0	0	1	(25) 6	3	(75) 8	4	8
	T	3	(13) 7	20	(87) 16	23	14	9	(36) 19	16	(64) 14	25	15
Finances	PT	1	(26) 4	3	(76) 3	4	3	1	(33) 3	2	(67) 3	3	3
	FT	1	(26) 8	3	(76) 17	4	13	1	(100) 6	0	0	1	2
	T	2	(26) 6	6	(76) 5	8	5	2	(50) 5	2	(50) 2	4	3
Other/Unknown	PT	7	(39) 23	11	(61) 10	18	13	4	(25) 13	12	(75) 15	16	15
	FT	1	(26) 8	3	(75) 17	4	3	7	(44) 41	9	(56) 25	16	30
	T	8	(33) 18	14	(68) 11	22	13	11	(34) 23	21	(38) 10	32	20
Totals	PT	31	(23) 71	107	(78) 88	138	82	31	(28) 86	79	(72) 89	110	68
	FT	13	(42) 30	18	(58) 14	31	18	17	(32) 35	36	(68) 31	53	36
	T	44	(26) 100	126	(74) 100	169	100	48	(30) 100	116	(71) 100	163	100

KEY:
* Male withdrawers by reason and enrolment type, as a percentage of total male withdrawers within that same enrolment category (vertical)
(*) Male withdrawers by reasons and enrolment type, as a percentage of total male withdrawers of the same enrolment type within that reason category (horizontal)
+ Female withdrawers by reason and enrolment type, as a percentage of total female withdrawers within that same enrolment category (vertical)
(+) Female withdrawers by reason and enrolment type, as a percentage of total female withdrawers of the same enrolment and type, within that reason category (horizontal)
o Male and female withdrawers by reason and enrolment type, as a percentage of the total number of withdrawers of both sexes, within that same enrolment category (vertical)

PT   Part time
FT   Full Time
T   Total

	PT or FT	European f	% A	NZ Maori f	% B	Pacific Island f	% C	Asian f	% D	Overseas f	% E	Other f	% F	Unknown f	% G	Total f	% [+]
Family illness/obligations	PT	6	[46] 6	1	[8] 14	·	·	·	·	·	·	4	[31] 21	2	[15] 13	13	9
	FT	3	[50] 13	·	·	·	·	·	·	·	·	2	[40] 100	·	·	6	16
	T	9	[50] 8	1	[6] 11	·	·	·	·	·	·	6	[33] 29	2	[11] 10	18	11
Attractive job opportunity	PT	11	[65] 12	1	[6] 14	·	·	1	[6] 100	·	·	3	[18] 16	1	[6] 6	17	12
	FT	7	[88] 30	·	·	·	·	·	·	·	·	·	·	1	[13] 25	8	26
	T	18	[72] 15	1	[6] 11	·	·	1	[6] 100	·	·	3	[17] 14	2	[11] 10	25	15
Left district	PT	6	[67] 6	·	·	·	·	·	·	·	·	·	·	3	[33] 19	9	6
	FT	3	[100] 13	·	·	·	·	·	·	·	·	·	·	·	·	3	9
	T	9	[75] 8	·	·	·	·	·	·	·	·	·	·	3	[25] 16	12	7
Personal/illness	PT	11	[55] 12	2	[10] 29	·	·	·	·	·	·	3	[15] 16	4	[20] 26	20	15
	FT	5	[71] 22	·	·	·	·	·	·	·	·	·	·	2	[29] 50	7	23
	T	16	[59] 14	2	[7] 22	·	·	·	·	·	·	3	[11] 14	6	[22] 30	27	16
Time related: Time clash/overload/work commitments	PT	27	[79] 28	1	[3] 14	·	·	·	·	·	·	2	[6] 11	4	[12] 25	34	25
	FT	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·
	T	27	[79] 23	1	[3] 11	·	·	·	·	·	·	2	[6] 10	4	[12] 20	34	20
Course not as expected	PT	21	[91] 22	·	·	·	·	·	·	·	·	1	[4] 5	1	[4] 6	23	17
	FT	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·	·
	T	21	[91] 18	·	·	·	·	·	·	·	·	1	[4] 5	1	[4] 5	23	14
Finances	PT	1	[25] 1	·	·	·	·	·	·	·	·	2	[50] 11	1	[25] 6	4	3
	FT	3	[75] 13	1	[25] 50	·	·	·	·	·	·	·	·	·	·	4	13
	T	4	[50] 3	1	[13] 11	·	·	·	·	·	·	2	[25] 10	1	[13] 5	8	5
Other/Unknown	PT	12	[67] 13	2	[11] 29	·	·	·	·	·	·	4	[22] 21	·	·	18	13
	FT	2	[50] 9	1	[25] 50	·	·	·	·	·	·	·	·	1	[25] 25	4	13
	T	14	[64] 12	3	[14] 33	·	·	·	·	·	·	4	[18] 19	1	[5] 5	22	13
Totals	PT	95	[69] 80	7	[5] 78	·	·	1	[1] 100	·	·	19	[14] 91	16	[12] 80	138	82
	FT	23	[74] 20	2	[7] 22	·	·	·	·	·	·	2	[7] 10	4	[13] 20	31	18
	T	118	[70] 100	9	[6] 100	·	·	1	[1] 100	·	·	21	[12] 100	20	[13] 100	169	100

KEY:

FT = full time; PT = part time; T = total

%A = European withdrawals by reason and enrolment type, as a percentage of total European withdrawals within that same enrolment category (vertical)

%B - %G = as above, for each ethnic category considered in turn (vertical)

[+%] = withdrawals from all ethnic groups, by reason and enrolment type, as a percentage of all withdrawals within that enrolment category (vertical column)

[%A] = European withdrawals by reason and enrolment type, as a percentage of total withdrawals of the same enrolment type, within that reason category (horizontal line)

REASONS BY ETHNICITY AND NATURE OF ENROLMENT 1993

	PT or FT	European		NZ Maori		Pacific Island		Asian		Overseas		Other		Unknown		Total	
		f	%A	f	%B	f	%C	f	%D	f	%E	f	%F	f	%G	f	%(+)
Family illness/obligations	PT	4	(80) 4											1	(20) 20	5	5
	FT			2	(67) 26							1	(33) 13			3	6
	T	4	(50) 16											1	(13) 20	8	5
Attractive job opportunity	PT	11	(85) 12	1	(8) 20									1	(8) 20	13	12
	FT	15	(88) 46									2	(12) 25			17	32
	T	26	(87) 21	1	(3) 6							2	(7) 12	1	(33) 20	30	18
Left district	PT	8	(89) 9									1	(11) 11			9	8
	FT	6	(75) 18	1	(13) 13			1	(13) 50							8	15
	T	14	(82) 11	1	(6) 8			1	(6) 50			1	(6) 6			17	10
Personal/illness	PT	9	(69) 10									3	(23) 33	1	(8) 20	13	12
	FT	2	(67) 6									1	(33) 13			3	6
	T	11	(69) 9									4	(25) 24	1	(7) 20	16	10
Time related: Time clash/overload/work commitments	PT	24	(80) 27	4	(13) 80							1	(3) 11	1	(3) 20	30	27
	FT											1	(100) 13			1	2
	T	24	(77) 20	4	(13) 31							2	(7) 12	1	(3) 20	31	19
Course not as expected	PT	18	(90) 20									2	(10) 22			20	18
	FT	2	(50) 6	1	(25) 13							1	(25) 13			4	8
	T	20	(83) 16	1	(4) 8							3	(13) 18			24	15
Finances	PT	2	(67) 2									1	(33) 11			3	3
	FT	1	(100) 3													1	2
	T	3	(75) 2									1	(25) 6			4	3
Other/Unknown	PT	14	(82) 16							1	(6) 100	1	(6) 11	1	(6) 20	17	16
	FT	7	(44) 21	4	(25) 50			1	(6) 50	2	(13) 100	2	(13) 25			16	30
	T	21	(64) 17	4	(12) 31			1	(3) 50	2	(9) 100	3	(9) 18	1	(3) 20	33	20
Totals	PT	90	(82) 73	6	(5) 39					1	(1) 33	9	(8) 53	5	(5) 100	110	68
	FT	33	(62) 27	8	(15) 62			2	(4) 100	2	(4) 67	8	(15) 47			53	33
	T	123	(76) 100	13	(8) 100			2	(1) 100	3	(2) 100	17	(10) 100	5	(3) 100	163	100

KEY:

FT = full time; PT = part time; T = total

%A = European withdrawals by reason and enrolment type, as a percentage of total European withdrawals within that same enrolment category (vertical)

%B - %G = as above, for each ethnic category considered in turn (vertical)

(+%) = withdrawals from all ethnic groups, by reason and enrolment type, as a percentage of all withdrawals within that enrolment category (vertical column)

(~A) = European withdrawals by reason and enrolment type, as a percentage of total withdrawals of the same enrolment type, within that reason category (horizontal line)

REASONS FOR LEAVING THE PROGRAMME BY AGE AND NATURE OF ENROLMENT

REASONS	P/T or F/T	1992						1993					
		< 17 - 29		30 - >40		Total		< 17 - 29		30 - >40		Total	
		#	% [*]	#	% [*]	#	% [*]	#	% [*]	#	% [*]	#	% [*]
Family illness/obligations	PT	4	29	10	71	14	10	3	60	2	40	5	5
	FT	4	80	1	20	5	16	2	67	1	33	3	6
	T	8	42	11	58	19	11	5	63	3	38	8	5
Attractive job opportunity	PT	9	53	8	47	17	12	8	62	5	39	13	12
	FT	6	75	2	25	8	26	13	77	4	24	17	32
	T	15	60	10	40	25	15	21	70	9	30	30	18
Left district	PT	4	44	5	56	9	7	3	33	∼6	67	9	8
	FT	3	100	·	·	3	10	7	88	1	13	8	15
	T	7	58	5	42	12	7	10	59	7	41	17	11
Personal/illness	PT	2	11	17	90	19	15	6	46	7	54	13	12
	FT	5	71	2	29	7	23	3	100	·	·	3	6
	T	7	27	19	73	26	15	9	56	7	44	16	10
Time related: Time clash/overload/work commitment	PT	8	24	26	77	34	25	10	33	20	67	30	22
	FT	·	·	·	·	·	·	·	·	1	100	1	2
	T	8	24	26	77	34	20	10	32	21	68	31	19
Course not as expected	PT	9	39	14	61	23	17	6	29	15	71	21	19
	FT	·	·	·	·	·	·	4	100	·	·	4	8
	T	9	39	14	61	23	14	10	40	15	60	25	15
Finances	PT	1	25	3	75	4	3	1	33	2	67	3	3
	FT	3	75	1	25	4	13	·	·	1	100	1	2
	T	4	50	4	50	8	5	1	25	3	75	4	3
Other/Unknown	PT	7	22	11	61	18	13	6	38	10	83	16	15
	FT	4	25	·	·	4	13	14	88	2	13	16	10
	T	11	50	11	50	22	13	20	63	12	38	32	20
Totals	PT	44	32	94	68	138	82	43	39	67	61	110	68
	FT	25	81	6	19	31	18	43	81	10	19	53	33
	T	69	41	100	59	169	100	86	53	77	47	163	100

KEY:

FT = full time; PT = part time; T = total

[*] = withdrawals by reason and enrolment type for each age category, as a percentage of the total Withdrawals of all ages within the same reason and enrolment category (horizontal line)

% = withdrawals by reason and enrolment type for each age category, as a percentage of all withdrawals within that age and enrolment category (vertical column)

DESTINATION OF WITHDRAWING STUDENTS BY GENDER AND NATURE OF ENROLMENT

DESTINATION	GENDER	1992 FT ☼		1993 FT ☼		1992 PT		1993 PT		1992 TOTAL		1993 TOTAL	
		#	%	#	%	#	%	#	%	#	%	#	%
Domestic	Men	2	9	0	0	0	0	0	0	13	16	6	7
	Women	0	0	1	3	11	19	5	10				
Employment	Men	5	22	6	18	7	12	7	15	32	39	38	46
	Women	6	26	12	35	14	24	13	27				
Overseas	Men	1	4	0	0	3	5	0	0	4	5	0	0
	Women	0	0	0	0	0	0	0	0				
Further Training	Men	2	9	1	3	2	3	4	8	22	27	18	23
	Women	3	13	6	18	15	25	7	15				
Unemployment	Men	0	0	3	9	1	2	2	4	3	4	6	7
	Women	2	9	0	0	0	0	1	2				
Unknown	Men	2	9	1	3	6	10	3	6	8	9	14	17
	Women			4	12			6	13				
TOTALS		23	100	34	100	59	100	48	100	82	100	82	100 Approx

☼   Destination of drop outs by category, as a percentage of total enrolments in that category.

REASONS CITED BY DROP OUTS WHO GAVE THEIR PLANNED DESTINATIONS

Reason (most frequent)	P/T or F/T	Employment				Further Training				Domestic				Unemployment				Overseas				Not Known (stated as such)				Total			
		1992		1993		1992		1993		1992		1993		1992		1993		1992		1993		1992		1993		1992		1993	
		#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Time Related	F	0	0	0	0	0	0	0	0	0	0	1	16.67	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
	P	2	6	4	11	5	23	6	33	1	8	2	33	1	33	1	17	1	25	0	0	1	13	2	14	11	13	15	18
Attractive Job Opportunity	F	8	25	13	34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	7	8	10	14	17
	P	16	50	7	18	1	5	1	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	21	8	10
Personal/Illness	F	1	3	2	5	1	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	25	0	0	4	5	2	2
	P	0	0	2	5	2	9	0	0	3	23	2	33	0	0	0	0	0	0	0	0	0	0	2	14	5	6	6	7
Course not as expected	F	0	0	0	0	0	0	1	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	14	0	0	3	4
	P	1	3	1	3	5	23	3	17	0	0	0	0	0	0	1	17	0	0	0	0	2	25	3	21	8	10	8	10
Family Illness/Obligations	F	0	0	0	0	2	9	1	6	2	15	0	0	1	33	1	17	0	0	0	0	0	0	0	0	5	6	2	3
	P	0	0	1	3	0	0	0	0	4	31	1	17	0	0	0	0	0	0	0	0	0	0	0	0	4	5	2	3
Left District	F	0	0	0	0	2	9	4	22	0	0	0	0	0	0	0	0	1	25	0	0	0	0	1	7	3	4	5	6
	P	1	3	5	13	3	14	0	0	0	0	0	0	0	0	0	0	2	50	0	0	0	0	0	0	6	7	5	6
Finances	F	2	6	0	0	0	0	0	0	0	0	0	0	1	33	1	17	0	0	0	0	0	0	0	0	3	4	1	1
	P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	17	0	0	0	0	0	0	1	7	0	0	2	2
Other/Unknown	F	0	0	3	8	0	0	1	6	0	0	0	0	0	0	1	17	0	0	0	0	0	0	1	7	0	0	6	7
	OP	1	3	0	0	1	5	1	6	3	22	0	0	0	0	0	0	0	0	0	0	3	38	1	7	8	10	2	2
Totals	F	11	34	18	47	5	23	7	39	2	15	1	17	2	67	3	50	1	25	0	0	2	25	5	36	23	28	34	42
	P	21	66	20	53	17	77	11	61	11	85	5	83	1	33	3	50	3	75	0	0	6	75	9	64	59	72	48	59
GRAND TOTAL		32	100	38	100	22	100	18	100	13	100	6	100	3	100	6	100	4	100	0	0	8	100	14	100	82	100	82	100

KEY: Total drop outs planning to leave for that destination citing a particular reason.

APPENDIX 24

Polytechnic students facing hardship

Financial hardship means that some Wanganui Polytechnic students cannot afford to eat regularly and are in danger of being evicted.

Wanganui Regional Community Polytechnic Students' Association president Kirby Weis said this year about 35 students had applied for hardship grants.

"This is only the tip of the iceberg because some have the problem of swallowing their pride to actually get the money," he said.

Although unable to give figures, Mr Weis said some students were unable to complete their courses this year because they could not afford another loan.

He said students were faced with finding holiday jobs between terms to pay off loans and if they could not find them, refinancing was often not an option.

Students were worried about being evicted, how they would repay loans and pay for food, Mr Weis said.

"Our local hardship fund has tried to help in delaying these problems but it is not in a position to solve them completely."

Mr Weis said a high number of students received monetary hand-outs to meet immediate problems such as buying food.

He said that discretionary funding was used a lot more than the process of going through council for a hardship grant.

"Education is a right that is being robbed from us by current Government policies."

Mr Weis said he was angry talented students were not being able to complete their studies and he did not see the situation improving unless the public joined students to make the Government return to a free education system.

"Education is fast becoming a privilege only for the rich, but as we all know, the majority of us are not rich. Education cannot be viewed as a business to make financial gains or returns."

Mr Weis said Wanganui students were not the only ones struggling.

"After attending a meeting of polytechnic student association presidents in Wellington last weekend, a disturbing picture of nationwide student hardship emerged," he said.

"With 200,000 polytechnic students across New Zealand, our future as an educated country is seriously being undermined by the low priority placed on education by this Government."

Source: Wanganui Chronicle, May 1993