NON-COMPLETION IN VOCATIONAL EDUCATION AND TRAINING AND HIGHER EDUCATION

A LITERATURE REVIEW COMMISSIONED BY THE DEPARTMENT OF EDUCATION, TRAINING AND YOUTH AFFAIRS

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May 2000

REB REPORT 4/00
Research and Evaluation Branch
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### Glossary

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<td>ANTA</td>
<td>Australian National Training Authority</td>
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<td>ASAT</td>
<td>American Student Admissions Test</td>
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<td>ASSIST</td>
<td>A Successful Start in Tertiary Study</td>
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<td>ATSI</td>
<td>Aboriginal and Torres Strait Islanders</td>
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<td>CSU</td>
<td>Charles Sturt University</td>
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<td>DETYA</td>
<td>Department of Education, Training and Youth Affairs</td>
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<td>ECSEL</td>
<td>Engineering Coalition of Schools Excellence in Education and Leadership</td>
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<td>ESB</td>
<td>English Speaking Background</td>
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<td>ESL</td>
<td>English as a Second Language</td>
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<td>FIPSE</td>
<td>Fund for the Improvement of Post-secondary Education</td>
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<td>GPA</td>
<td>Grade Point Average</td>
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<td>HE</td>
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<td>HECS</td>
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<td>MLCR</td>
<td>Module Load Completion Rate</td>
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<td>NCVER</td>
<td>National Centre for Vocational Education Research</td>
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<td>NESB</td>
<td>Non English Speaking Background</td>
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<td>OLI</td>
<td>Open Learning Institute</td>
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<td>PDP</td>
<td>Professional Development Programme</td>
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<td>SAS</td>
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<td>SPU</td>
<td>Student Progress Unit</td>
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<td>TER</td>
<td>Tertiary Entry Ranking</td>
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Acknowledgements

We are grateful for the advice of Professor Mantz Yorke (Liverpool John Moores University), and Ian Dobson (Monash University) in the preparation of this report.
EXECUTIVE SUMMARY

This review of the literature on the reasons for non-completion, and the strategies designed to reduce non-completion in Vocational Education and Training (VET) and Higher Education (HE) was primarily aimed at providing a comprehensive account of the Australian experience, with supporting material from the United States and the United Kingdom. The focus in HE is limited to undergraduate courses. The reviewers were also asked to provide an examination of the adequacy of the current data sources, and to identify areas in need of further research.

Although there are areas of common concern to both VET and HE in the definition of non-completion, the operational definitions and processes of data collection present different problems. The issue of definition at the system and institutional level is an obstacle to accurately identifying the nature, extent and causes of non-completion, and therefore also makes the selection of strategies to reduce non-completion problematic.

Non-completion in both the VET and HE student experience does not always equate with failure. Non-completion may signify the achievement of desired goals, either in the sense that skills have been gained, employment outcomes realised or articulation to further or higher studies successfully negotiated. Given that many students return to study fairly soon after withdrawing from a course, and a substantial number return at some time later, the notion of non-completion from a lifelong learning perspective is less meaningful than it once was. However, for the most part, non-completion remains a serious problem, especially for students from disadvantaged circumstances and in particular fields of study and disciplines.

The current data sources on non-completion are far from adequate if they are to serve the needs of multiple stakeholders. Local variations in the compilation and interpretation of data at the institutional level make trend and comparative analysis of non-completion difficult. System and institutional level understandings of non-completion require different approaches to monitoring patterns of student departure and, in many cases, re-enrolment.

The reasons for non-completion are typically classified broadly as those subject to the control of the VET and HE institutions, and those which arise from the personal circumstances of the individual student. In reality, the line is not so easy to draw. Institutions are increasingly taking responsibility for a wider range of factors influencing non-completion. On the other hand, students still make choices to ignore the best professional advice on their capacity to succeed in courses, and they may or may not choose to take advantage of the increasingly sophisticated support services available to them.

From the variety of studies outlined in this review it is clear that student withdrawal is a complex and often very individualised process involving the interplay of institutional, social and personal factors. Identifying single factors influencing withdrawal is risky since the research consistently demonstrates that it is rarely the case that any one factor is the cause for a given student deciding to leave.

Factors such as wrong choice of course or subject, poor preparation and lack of readiness and commitment, figure prominently in the reasons for non-completion. These suggest the need for a closer examination of the information, recruitment and selection processes. A substantial number of students are not at all well-informed about the nature and demands of the courses for which they apply. The mismatch between student expectations and reality is a primary cause of confusion and uncertainty.
The literature makes it abundantly clear that the quality of the initial student experience in a course is critical to the chances of students persisting. This is especially so for students who might be identified as at risk of not coping with the demands of the course. In universities, the management of transition to the first year is increasingly becoming a major activity since it is now understood that the effort invested in the early years reduces the likelihood of problems leading to non-completion in later years.

Student dissatisfaction with the university experience, the style and quality of teaching and learning, workloads, and a lack of fit between student capacities and institutional demands are major contributors to early withdrawal. Closely related is the lack of social integration, the absence of a sense of belonging, and difficulties students have in engaging with the educational process.

The pressure of other commitments outside study is increasingly identified as a major influence on non-completion. The predominant reasons for voluntary student withdrawal are the demands of employment—full-time or part-time— which is often associated with financial difficulties, and health and family issues. It is likely that the nature of the student role in VET and HE, including their commitment to learning, is changing. There is some evidence to suggest that students are becoming disengaged from their educational experience and the role of part-time work is more influential in shaping their commitment than in the past.

Students who withdraw and students who persist are not necessarily distinct groups. Concerns and attitudes that lead to withdrawal for some students are shared by others who persist. This makes prediction of possible withdrawal very difficult and suggests that broad institutional strategies, as well as strategies directed at particularly vulnerable groups of students, are likely to be most effective.

Broadly speaking, the two key areas for attention are firstly, the development of strategies to help students make informed choices about their courses, and secondly, strategies to improve the quality of the initial student experience when adjustment and commitment are most problematic.

The first step needed for designing and implementing effective strategies is accurate identification of the nature and extent of the problem. This requires effective data collection at both the system and institutional levels that provides information about the timing and extent of non-completion, but more particularly, about the reasons students leave.

The strategies outlined in the review are focused largely on the initial experience of students. They include: efforts to provide more useful information to students about the nature and demands of HE and VET courses; enhancing links with schools; managing the transition process with orientation programs, bridging courses and credit-bearing preparation studies; improving the quality of teaching in the early stages of study; and, a wide range of student support initiatives.

There is a serious lack of systematic evaluation of the effectiveness of the strategies in use in Australia. It is simply not possible to identify and promote successful strategies with great confidence that might be readily generalised from one context to another.
The review relies heavily on some major studies from overseas. We do not have comparable data that can give us, for example, thirty-year trends in student values, behaviour or outlooks. Given the many changes accompanying mass higher education—from flexible course delivery to greater diversity in the student population—it is likely that the studies on which we rely are becoming dated. Nor do we have enough recent and substantial data across a representative range of institutions and contexts. To address this obvious absence of recent and systematic research on non-completion in Australia there is an urgent need for a cohort study that:

- includes regular surveys/interviewing of a sample of students to explore in a detailed way how the general factors, which are relatively well known, operate at a personal level; and
- attempts to identify both the process and the trigger points for withdrawal, and for return.

The review also identifies some areas of specific concern that require investigation, especially: the lack of studies that examine in detail the reasons students withdraw in years later than the first year; the issue of readiness for specific discipline studies; the impact of flexible delivery modes on attitudes towards non-completion as well as their strategic use for reducing non-completion; and, the changing expectations and study careers of students.

Finally, the absence of ongoing national studies in Australia makes international comparisons piecemeal and relies on fortuitous rather than systematic analysis. There is some merit in developing cross-national studies with comparable national systems.
CHAPTER 1
PROBLEMS OF DEFINITION

Introduction

This literature review was prepared in response to concern regarding the level of student non-completion in both the higher education and vocational education and training sectors. The purpose of the review is primarily to provide the basis for policy analysis, and to inform plans for further research on the reasons for non-completion. In addition, the review includes a summary of the range and effectiveness of strategies employed to reduce non-completion for the purpose of indicating possible directions.

Limiting the scope of the review, which was conducted over a very short period, presented challenges. First, taking a selective and thematic approach to extract the major themes on which policy and research can be developed has meant that some useful institutional case studies have been excluded. We have, however, included many of these in the bibliography. Second, avoiding duplication with other current projects commissioned by the Department of Education, Training and Youth Affairs (DETYA), such as a study of apprenticeships, has resulted in some apparent gaps in the report. Third, given the time available and the attempt to find areas of common concern to VET and HE, we did not examine the issue of non-completion in post-graduate studies, which, in our view, presents a distinctive set of problems. A fourth challenge is the existence of some fundamental differences between the HE and VET sectors in terms of their purposes and student experiences and expectations that make general conclusions somewhat vague. We have tried wherever possible to draw out common elements from both sectors to provide the basis for a broader strategy to address non-completion at the system level.

Finally, there was the challenge of providing some balance in the reporting of research from the HE and VET sectors when it is clear that the subject of non-completion has been a major research theme in HE for many years but not in VET, with the notable exception of the work by Martinez in the United Kingdom (see especially Martinez and Munday 1998). The paucity of research in the VET sector, both in Australia or elsewhere, has been observed by a number of commentators (Martinez 1995, Teasdale and Teasdale 1996, Dunn 1995, McGivney 1996). There seem to be three prevailing assumptions underlying the lack of interest in this area in VET:

- Attrition is due to factors beyond the control of the institutes/colleges and therefore cannot be influenced or addressed (Martinez 1995).
- Attrition is due to normal processes of over-enrolment, based on the expectation that large numbers will drop out early in their course (McGivney 1996).
- There is diversity in student motivations and expectations that is beyond the control of the institutions.

These assumptions are now being questioned. Accountability requirements, the need for increased efficiency in resource allocation and the diminishing pool of funds in the tertiary sector have led to increasing concern about the levels of non-completion (Kenwright 1997). As yet, however, they have not led to an increase in research in Australia into the processes associated with non-completion in the VET sector. We have reduced the sheer volume of...
material on HE but it was not considered appropriate to balance the contributions by a significant reduction in the HE literature since it is so substantial and informative.

This review focuses on research since the early 1980s. However, student attrition in Australia has been the subject of research for some four decades. Significant institutional studies were carried out during the 1970s. Hall and Harper (1981) identified studies of student discontinuance from twelve universities conducted since the mid-1970s (thirteen when including their own study) and another being undertaken at the time. They included studies from the University of Sydney (Williams and Ainsworth 1976); the University of New England (Watkins and Seaton 1976); the University of New South Wales (Lewandowski, Powell and White 1976); La Trobe University (Gallagher 1978); the University of Newcastle (Maddox 1979); Flinders University (Sheldrake 1976) and the University of Adelaide (Smith 1978). Further institutional studies followed in the early 1980s (Anderson and Johnston 1983).

The reports differed in their methodology, coverage and definitions of non-completion, but together they illustrate the continuing concern with attrition, dropout and discontinuance in Australian universities. Key factors identified as ‘university’ reasons included course content, workload, teaching methods, student discontent with courses, and courses not meeting students’ expectations. Personal reasons, or those external to the institution, included finance, the pressure of employment and insufficient time, personal and family pressures, ill health and changing life and career goals. The list is repeated in one form or other throughout the literature but, as this review notes, the relative influence of these factors is problematic.

Despite the shift from ‘elite’ to ‘mass’ education and much more diverse student populations in the higher education institutions of the late 1990s, there has been a surprising consistency in estimates of attrition in higher education at around one-third in Australia, including the most recently reported DETYA analysis of the 1992 cohort.

**Interchangeable terms**

Analysis of non-completion in both the VET and HE sectors is confounded by problems of definition. Attrition, dropout, discontinuance, withdrawal and non-completion are often used interchangeably in the literature.

While the term ‘student dropout’ was current twenty to thirty years ago, it has largely, but not wholly, been replaced by more neutral terms such as student attrition, withdrawal, discontinuance or non-completion. There is some confusion in the literature around the terms used. Yorke (1999) refers to the terms as ‘portmanteaux’—able to be interpreted in various ways. Attrition is often equated with withdrawal from the institution in which students are enrolled (Ramsay, Tranter, Sumner and Barrett 1996, p. 8), whereas this is not necessarily the case.

The definition of ‘non-completion’ adopted by DETYA for the literature review is ‘non-achievement of outcomes generally considered the norm for the sector concerned. At the university level, it refers to students who commence study but do not gain a university qualification’. It thus focuses on only one of what Yorke describes as the three main units of analysis in non-completion, i.e. the programme as a whole, the year or level of study and the study unit (Yorke 1999, p. 86).
Different perspectives on non-completion might perhaps be characterised as the institutional view and the systems view. A student who leaves an institution and goes to another institution either soon after or some time later is a non-completer from the perspective of the original institution, but not from the perspective of the system. Price, Harte and Cole (1991) in fact suggest three categories of withdrawal: systems attrition, institutional attrition, and internal attrition, the latter referring to students who transfer between courses within the same institution. They are not lost to a particular institution but they contribute to course attrition in institutional and national statistics. And, as we note throughout the review, there is the perspective of the individual. Tinto (1993) suggests that if the leaver does not define his or her behaviour as representing a form of failure, neither should the institution (p. 132).

Clearly, completion (or non-completion) of a qualification would seem to be useful information to have, but it has some inherent difficulties of definition and of measurement, as have the other two units of analysis noted by Yorke:

- In a relatively flexible system, completion can legitimately take place over a relatively long period and it is both difficult to establish a norm and to measure outcomes for all.
- Completion of a qualification does not allow a distinction to be made between individuals who do not complete because of academic failure and those who do not complete for a range of other reasons.

Most HE students gain a qualification within the required time limits but the heterogeneous nature of students and patterns of student progress within the sector make for considerable flexibility and diversity in determining the norm for the sector. The student population includes:

- large numbers of part-time students;
- students in combined degrees reducing their load to just one degree;
- students repeating either separate units or years of study;
- students transferring to different courses within institutions or to different institutions;
- students deferring study for a period; and
- students who discontinue when they are young and return many years later as mature-age students.

Other assumptions that have an impact on ‘the norm’ are the notion that students have a study career firmly fixed by time and place. A number of studies, both Australian and overseas, have noted that relatively high proportions of students who withdraw from a course are quite likely to return to study, either fairly quickly or resuming at a later stage of their lives.

In the VET sector the terminology used in the literature is likewise neither precise nor consistent. Again, non-completion, withdrawal, dropout and attrition generally are used interchangeably, despite important underlying differences in assumptions about the reasons for non-completion. Dropout and attrition have negative connotations and are usually associated with failure to progress satisfactorily. In general, they signify a definite (if not permanent) termination of studies. Withdrawal also has connotations of termination and failure.
Non-completion in the VET sector is difficult to measure, both in conceptual terms and in technical terms relating to quality and availability of data. To begin with, a distinction must be drawn between course completion and module completion. For the VET sector, Australian data collected at the national level measure rates of module completion/non-completion. The Module Load Completion Rate (MLCR) measure represents the percentage of training module hours completed, rather than the proportion of students who pass modules. It is weighted for module length to take account of persons who complete modules of longer duration than others. The term does not imply failure on the student’s part nor suggest a more general termination of studies. This is important since it cannot be assumed that non-completion is either a negative or permanent outcome, since many students who do not complete a particular course either change course or continue their studies in a different sector.

In Australia, most VET activity is at the sub-qualification level. Therefore, course completion is not a relevant measure of successful outcomes for students who choose to enrol only in one or a number of selected modules and whose primary aim is to gain skills rather than a qualification. Only one study questioned this concept. A Victorian project (Holmesglen College of TAFE 1992) presented some evidence that most students intend to complete their course, rather than simply do a few modules, although further evidence of this assertion could not be found in the literature.

For both the VET and HE sectors in this study, non-completion is perhaps the most satisfactory and comprehensive term although it does not provide sufficient focus for action when it comes to strategies. For example, ‘preventing early withdrawal’ suggests practical steps that can be put in place to encourage students to persist in the face of initial uncertainty. Improving completion is a meaningful goal as a broader strategy for a course or an institution.

Nevertheless, several of the studies described in this report refer to withdrawal, dropout and attrition where non-completion might be more accurate. We do not attempt the pedantic and ultimately fruitless task of exposing or correcting the terminology in each case where this occurs. It is generally clear from the context what phenomenon is under investigation.

**Non-completion and cross-sectoral movement**

It is also the case that linear patterns of education and work are no longer as typical as they used to be. Young people’s ‘pathways’ through education and their relationships to the structures of education and work are becoming increasingly diverse, changeable and non-linear (Wyn and White 1997). These patterns make for considerable difficulties in establishing ‘cut-off points’ for non-completion. They also make for problems in collecting data that allow tracking of the range of pathways towards completion of a qualification. A DETYA (1999) paper, ‘Student Attrition’, indicates that current data sources do not allow the tracking of students who change institutions, or who change sectors.

In Australia, Golding’s research illustrates one aspect of movement between sectors. He notes that post-secondary students are using less standard and less well-identified articulation pathways, in larger numbers, especially in moving from higher education to technical education institutions. Moreover, they are doing this, i.e. moving from higher to technical education, ‘without encouragement, advice or assistance, and in the relative absence of formal credit arrangements’ (Golding 1995, p. 21).
There are indications of considerable movement between institutions and between sectors. Students cross institutional and sectoral boundaries for all sorts of reasons other than inability to cope academically and there are indications that problems of adjustment or environmental factors are more important than ‘intellectual difficulties’ (Williams and Pepe 1982, p.1). West et al. (1986) noted that concern about student withdrawal from higher education institutions failed to consider students who ‘flow back into the system as a whole’. In 1995, about 22% of commencing bachelor students at Australian universities had prior experience of a higher education course (Pargetter et al. 1998, p. 73). Two-thirds of these students (14% of the total) had an incomplete higher education course. Pargetter et al. suggest that most are ‘course switchers’; and some would have failed in a previous course (p. 74).

Credit transfer arrangements, the blurring of sectoral boundaries reflected in the promotion of a ‘seamless’ education system, and notions of lifelong learning, all suggest that intersectoral transfers be regarded as positive developments. They also raise the question of the purpose of the first degree and the complexity of the notion of non-completion with respect to lifelong learning.

When is Non-Completion a Problem?

It has long been recognised that non-completion is not necessarily negative. Tinto (1993), whose theoretical work underpins much of the empirical research in the United States over the past twenty years, argued that institutions must decide which forms of departure are to be defined as dropout and therefore be the object of institutional action, and which should be considered the regrettable but perhaps unavoidable outcome of institutional functioning. Likewise, government policy needs to be firmly based on a clear understanding of the nature and extent of non-completion as a problem.

Ramsay, Tranter, Sumner and Barrett (1996, pp. 8-10) summarised positive and negative perspectives of attrition in Australia. On the positive side:

- Highly prestigious institutions may assume that high attrition is an inevitable consequence of maintaining highly competitive academic conditions, and regard such rates as a form of quality control and a positive educational outcome.
- There are a range of individual motives for enrolling and for withdrawing that must be seen as positive outcomes, e.g. individuals who enrol for the specific purpose of completing only a selection of subjects and who succeed in these subjects; people who gain certain skills and withdraw to take up an employment opportunity.

Negative perspectives of attrition reflect negative impacts on both institutions and individuals, including the following:

- Attrition is considered a waste of institutional resources, especially in an environment of limited financial and other resources.
- Attrition damages the reputation of individual institutions.
- Withdrawal because of academic failure lowers self-confidence and self-esteem for individuals.
• When individuals do not achieve their full potential and society does not realise the benefits from their further education, this represents ‘wasted talent’.

To which might be added the blocking of potential opportunity by students who were unsuccessful in gaining admission.

In the VET sector, non-completion of modules does not necessarily signify a negative outcome, any more than non-completion of a course does for a student whose goal is a marketable skill rather than a qualification:

...completion is an institutional artefact...To the student who seeks a job in the field, completing the programme becomes irrelevant as soon as a job is available. The categories ‘graduate’ and ‘dropout’ lose much of their force when viewed in this light (Cohen and Brawer 1996).

The significance of completion, then, depends on the views of the stakeholders. For an employer, acquired skills may be more important than an assessed qualification, but a funding body that depends on module completion rates to assess programme efficacy and efficiency will nevertheless view non-assessment as non-completion and consequently as a system failure (Cleary and Nicholls 1998).

Similarly, in both HE and VET, a student may view a job placement as a successful outcome regardless of whether or not the module or course has been completed. In the United States context, Kerka (1995), in a study of non-completers, questions the concept of ‘drop outs’ and provides evidence that many leave when they feel their goals have been realised.

In an early pilot study at Monash University, McInnis and Thomas (1976) referred to ‘students eligible to continue studies at that university, who have voluntarily withdrawn, either temporarily or permanently, from their studies’ as ‘successful dropouts’, thus distinguishing them from students who leave because of failure and emphasising the potential for their return.

Cohen and Brawer (1996) discuss in some detail the positive roles a college programme may play for those who do not complete that programme. These include the role of ‘employment agency’ where the course relays information on job opportunities, which may be taken up by the student before finishing his or her course; the role of career advancement, where the learning of some new skills leads to the student receiving a better job in the company where the student is already employed; and the role of study advancement, where a student transfers to other programmes in the same or in a different college.

For Cohen and Brawer, the process of the curriculum, with the various possibilities it creates, seems to be the important thing, rather than the product at the end of the process (the qualification). Moreover, in diploma-level courses, where non-completion is significantly higher than in certificate courses, withdrawal from a course is often an indication of the use of credit transfer arrangements to enter the higher education sector rather than of inability to complete the diploma (Lamb, Long and Malley 1998).

There is, however, considerable danger in being overly positive about non-completion. Grubb (1995) maintains that low completion rates remain a concern, ‘especially because they are particularly low for minority students’ (1995, p.28) and he argues that we should still be concerned about non-completion because the economic benefits of community colleges are
much higher for students who *do* complete their programmes. As we noted earlier in this chapter, Grubb questions what he describes as having developed into a ‘conventional wisdom’—the belief that dropouts leave because they have attained what they set out to achieve on enrolment. This, he argues, assumes sophistication among students that we cannot take for granted. Not all dropouts enrol knowing exactly what benefits they can expect to get from their course and exactly when to maximise these benefits by a strategic withdrawal. A more complete discussion of the evidence presented in this debate is, of course, provided in the section dealing with reasons for non-completion.
CHAPTER 2

ADEQUACY OF CURRENT DATA SOURCES

The difference in the collection of data by the VET and HE sectors on non-completion makes comparison of the two sectors problematic. For that reason, the sectors are dealt with separately in the following discussion.

Data sources in the VET sector

Module Load Completion Rates (MLCRs) are used as a proxy for the measurement of completion rates in the VET sector, though they measure the proportion of module activity completed, rather than the proportion of students completing actual modules. Data relate to activity in TAFE Institutes, as well as to funded activity in the ACE sector and for private providers.

These statistics, which are reported yearly by the Australian National Training Authority (ANTA) in its Annual National Report (Vocational Education and Training Performance), are disaggregated by state/territory and by the six defined population equity sub-groups: gender; location (capital city, other metropolitan, rural, remote); Indigenous; non-English speaking background; born in a non-English speaking country; and disability.

These figures are available for the years 1995, 1996 and 1997, although data for 1995 are not comparable with later years due to methodological reasons. It is anticipated that new VET sector performance measures currently being implemented will continue to collect data related to module load completion.

A difficulty with this data set is that comparable module load completions data have only been collected since 1996, preventing analysis of trends over time. Furthermore, NCVER (1998) research suggests that there may even be a lack of consistency between institutes as to the manner in which MLCRs are recorded. Cleary and Nicholls (1998) also note a lack of consistency at the institute level in the methods used for collecting MLCR data and the fact that this results in very crude and insensitive indicators.

Studies in the United Kingdom have also found data collection problems, with college-based information systems described in some instances as hopelessly inadequate, in some cases showing that students have withdrawn when they are still enrolled (Martinez 1995).

Yet these difficulties do not, in a sense, represent the major problem. While they reflect deficiencies in the process of collecting accurate data on student withdrawals (and therefore make quantification of the problem difficult), they do not touch upon the issue of the reasons for students withdrawing.

Neither existing data sets, nor those under consideration, generate information on the reasons for non-completion. Client satisfaction surveys, which are reported in the ANTA Annual National Report, make use of data collected from exiting students only. They are not used with students who have withdrawn. This leads to two major deficiencies in the data collection process. Firstly, it excludes an important perspective when assessing the effectiveness of the VET sector—that of non-completers. And secondly, it precludes the
possibility of collecting information on the reasons for students withdrawing. This means, in effect, that longitudinal data are available for completers but not for non-completers.

We do note, however, that an expanded Graduate Destination Survey—to be renamed the Student Outcomes Survey—is planned. This will pick up a sample of people who have completed some modules, but not necessarily a qualification. Of those not planning to undertake further training in the coming year, it will ask the reasons for choosing not to continue.

At the local level, the situation is not very different. Little is done in terms of self-monitoring within institutes, and where this occurs the data cannot be aggregated across institutions. In some cases, withdrawing students are asked to complete a form asking for the reasons for withdrawal, but the return rate is generally low and (it would seem) is rarely monitored (Cleary and Nicholls 1998). It is appropriate to acknowledge, however, that the turnover of students in the VET sector is very high and close monitoring is likely to be a major administrative exercise at the institutional level.

In the United States, the situation is similarly problematic. Grubb (1995) has noted that the community college sector has based its performance measurement effort almost exclusively on participation measures, with output measures such as completions a rarity in most states. Pucel (1979) comments on the need for reliable longitudinal data:

> Longitudinal methods become important in the study of the relationships between vocational programme practices and student development. It is difficult to examine the relationships between students and programmes unless the information is gathered on the same students’ programmes over time.

Yet, determining the reason why an individual does not complete is crucially important in the VET sector. The need for sensitive measures of non-completion, which ask the reasons for non-completion and which also take account of the desired outcomes rather than simply measuring module completion, is stressed in much of the literature. Cleary and Nicholls (1998) note that client satisfaction surveys need to be expanded to include students who do not complete, in order to provide a comprehensive client perspective on VET provision.

**Sub-group data**

Finding reliable data on reasons for non-completion among population sub-groups of various kinds is also difficult. Teasdale and Teasdale (1996) have noted the paucity of information on why Aboriginal and Torres Strait Islander students withdraw from TAFE courses and Schofield and Dryen (1997) note the need for better outcome measures to assess the performance of women in VET.

While MLCRs can be broken down by equity groups, discovering the reasons for differences between groups in non-completion requires further data, additional to that provided by the MLCR reporting. Generally, it depends on funded research of the statistical modelling kind. Some examples of this exist (OTFE 1997, NCVER 1998), but while studies such as these provide useful information on performance of various population sub-groups, the fact that they are single-state, ‘one-off’ projects means that they do not contribute to the analysis of trends over time or provide a national perspective. Neither do they seek the reasons for non-completion.
Institutional studies in the VET sector

Single-college studies, which form the majority of research projects discussed in this report, are a further source of data on non-completion. But these also present difficulties. Firstly, they usually require funding support of some kind. Secondly, they do not provide data comparable between institutions or between states. Thirdly, they are usually ‘one-off’ and do not allow trend analysis. And fourthly, they usually fail to provide longitudinal data. Such research is nearly always ‘ex post facto’ or at best ‘cross-sectional’ (see Macdonald 1984). The latter kind of study involves collecting data on a range of attitudinal variables while the cohort is still enrolled and then identifying which students have re-enrolled and which ones have withdrawn one year later. The original responses are then compared for the two groups.

In summary, on a national and statewide basis, analysis of rates of non-completion in the VET sector depends on the use of the national measure—Module Load Completion Rate (MLCRs). Data on the reasons for non-completion are not collected at this level.

Some single-state, statistical modelling studies have been carried out. These provide data on the performance of various population sub-groups, but allow few comparisons to be made over time or nationally. Neither do they collect information on reasons for non-completion. At the level of the individual institute, various studies examine reasons for non-completion, but these rarely provide data that allow trends over time to be estimated. Nor do they allow consistent comparisons to be made between states or institutions. A further point is that the vast majority of institutions do not have access to the resources necessary to conduct such studies, particularly if they are time-intensive, longitudinal studies.

Ideally, data would be collected nationally and on a yearly basis. It would be longitudinal, allowing the tracking of students through their studies and into their exit destinations, and collecting attitudinal data both during their studies and after exiting their course. The data would be collected in a consistent manner, allowing comparisons between institutes, between states and over time, but it would also allow data relevant to the local context to be collected.

Data on non-completion for apprentices and trainees

Studies of non-completion of apprenticeships and traineeships are rare, and the few that exist present data which are not easily comparable with studies in other areas of VET, although a recent Victorian report (OTFE 1997), found that non-completion was higher in other forms of training than in apprenticeships and traineeships.

Grey et al. (1999) report that the rate of traineeship non-completion (44%) is similar to the rate of separation from permanent jobs and from apprenticeships. They also note that individuals who complete their traineeships have considerably higher chances of being in unsubsidised employment than those who do not. It is even more likely that this would be the case for apprentices, where the qualification is usually a pre-requisite to employment in the field. For this reason, course completion rather than module completion is perhaps the better measure for students in indentured training, and this would make comparison with other VET students all the more problematic.
Data sources in the Higher Education sector

In the HE sector it is not possible to obtain a clear and thoroughly comprehensive national picture of student non-completion from current data sources. This is related partly to difficulties inherent in defining non-completion at the system and institutional levels. For example, for statistical purposes one university classifies students who discontinue their courses after first year as:

- ‘transferred’—those who have transferred to another course either at the same university or at another;
- ‘lapsed’—those who have not formally withdrawn from courses and failed to notify anyone of their moves;
- ‘discontinued’—those who withdraw voluntarily or at a faculty’s request.

Using these classifications there are no data generated across the higher education sector which would allow institutional comparison that is meaningful for the universities. Examples of barriers to the compilation of such data include:

- Institutions which add the ‘lapsed’ and ‘discontinued’ when calculating the numbers of non-completers;
- Of the students who withdraw, a large proportion transfer into courses within the same institution; and.
- Many of these students who have technically withdrawn decide to reduce their commitment from a combined degree to a single degree.

The SPU (Student Progress Unit) has been used to assess student progress. The SPU measures the ratio of the output student load successfully completed by students and the input assessed student load for each student. Dobson and Sharma (1993b) argue that this is a better measure of student progress than course completion rates. The latter ‘assumes that where a student does not complete a programme they have not gained anything from higher education learning experiences’ (p. 203).

Australian universities report results to DETYA as Withdrawn, Failed, Passed or Incomplete. The SPU is the ratio of Passed to the sum of the other three categories. GPA (Grade Point Average), while widely used as a measure in the United States, is not often used in Australia. It takes account of the level of pass result, thus adding a qualitative element (Dobson and Sharma 1995) and providing a further depth to analysis of the performance of various categories of students. Subject results are held as institutional data.

While the SPU allows monitoring of progress and is based on a more positive approach to student outcomes than a measure of course completion, it is not a solution to the broader issue of tracking students across extended periods of time, and in different institutions and different sectors. In the absence of nationally centralised recording of individual progress, other approaches have to be sought in order to get a more accurate picture of non-completion. For example, Cleary and Nicholls (1998) recommend the construction of ‘local measures’, sensitive to individual institutions’ needs and which collect information on reasons for withdrawal in a sensitive manner. On this matter, Barwuah, Green and Lawson (1997) advise the careful selection and training of staff to collect data, in order to overcome problems.
associated with students’ perceived lack of confidentiality, and recommend that such data be widely disseminated within the college.

However, the accuracy of data recorded by institutions in relation to students who withdraw is sometimes questionable, especially in regard to reasons for withdrawal. Sharma and Burgess (1993) found that student discontinuation in one institution was over-estimated by between 26 and 30 percent, and that:

- students who were thought to have withdrawn were in fact graduated, deferred or re-enrolled students; and
- some leave of absence may be approved by academic departments but not communicated to the Registrar of the institution.

At the institutional level, exit surveys/questionnaires miss out on the students who do not formally withdraw. A number of studies have found this to be the case with a sizeable proportion of withdrawing students.
CHAPTER 3

OVERVIEW OF SOURCES AND THEMES IN THE LITERATURE

Along with research in most other fields of education, there has been a gradual shift from regarding withdrawal as primarily attributable to deficits in students, through to a consideration of sociological factors, and more recently—in response to the emergence of mass higher education—to the current recognition of the role that institutions play in promoting student retention and avoiding student withdrawal.

Theories and Models

Theory in regard to non-completion is generally underdeveloped (Yorke 1999). Despite the large body of research concerning attrition and related issues, especially in the United States, there are significant gaps in understanding. Yorke sums up the present situation by suggesting that theories will continue to be inadequate without ‘substantial longitudinal evidence which would enable the various models that have been put forward to be refined with reference to their underlying dynamics. There is too little understanding in the United Kingdom of how potential influences on non-completion actually precipitate it’ (p. 12). This assessment is also valid for Australia.

Models developed by Tinto and Bean in the United States have been particularly influential and have generated a considerable amount of research in that country and elsewhere. There are far fewer studies in Europe, Australia and New Zealand, although in Australia, interest in and concern about student retention and attrition goes back to the 1950s.

In HE, the greatest rate of student attrition occurs in the first year of undergraduate study. The consistent finding is that the attitudes, values and skills that are developed in the first year set the scene for later years. The close relationship between transition and retention issues is articulated by Pargetter et al (1998) thus: ‘… the effects of negative transitions to first year tertiary are … often only revealed as discontinuations or failure in later years’. There is naturally, therefore, considerable overlap in theory and research on attrition and the first year experience.

The work of Tinto (1975, 1988, 1993) has been particularly important in establishing the role of the institution in promoting an environment for student persistence and integration. It must be emphasised, however, that for the United States, most of the theory and research is based on the assumption that the experience of school leavers is the norm. This is not the case at all in Australia where part-time and mature age students have traditionally been a large proportion of the undergraduate student population.

The concept of integration of young full-time students is central to Tinto’s theory. Students are conceived as entering an institution with certain background attributes, and with goals, intentions and commitments. Their academic and social experiences in the institution will either serve to integrate them into the institution or not. The higher the levels of integration, the more likely the student is to persist.

The institution is seen as a social system with its own values and social structures. Integration is largely the result of two factors, the degree of congruence that develops
between the student and the value patterns of the college collectively, and the sufficiency of interaction with others in the college (staff and students).

Commitment towards educational goals and commitment to a specific institution that enables fulfillment of a student’s goals result from both personal characteristics of the student and the degree of academic and social integration with the institution. Goal and institutional commitments are continually modified in the interaction process in ways that lead to persistence or to various forms of dropout. Tinto also argues that students operate within a cost-benefit environment in that the benefits of present or expected future satisfactions diminish at the same time as the cost of persistence is increasing.

Tinto has also been influential in emphasising the longitudinal nature of the process that leads to withdrawal (as well as to retention), turning to social anthropological notions of rites of passage and the stages of separation (from the previous group or status), transition, and incorporation that are involved in establishing membership of a new group (Tinto 1988). He was partly motivated by a concern that the emphasis on first year withdrawal had, in his view, led to an inaccurate assumption that reasons for institutional departure are similar across the college career, whereas some studies and anecdotal evidence strongly suggest that this is not the case.

Institutional departure is conceived as a longitudinal process, resulting from difficulties encountered by students in making the separation from previous behaviours and norms, in making the transition to the new set of college behaviours and norms, and finally in becoming incorporated into the academic and social life of the college. So, while the departure ‘necessarily reflects the absence of integration into the life of the college, it may arise at different points of time from different problems’ (Tinto 1988, p. 449).

Tinto maintains that while his theory of stages in the process of departure assumes a residential college model, it can be applied to many non-residential situations, as all higher education requires students to make a significant degree of adjustment to a new intellectual and social environment.

Yorke (1999) suggests that Tinto’s theory has relatively little to say about the impact of external factors in shaping students’ perceptions, commitments and reactions, and that while it is institutionally oriented, institutional contributions to failure in the integration process tend to be in the background. While this may be so in his earlier work, in a later extensive review of student attrition, Tinto devotes considerable time to discussing the dimensions of institutional action and how they affect student behaviour (Tinto 1993). More recently, he has turned to notions of the classroom as a learning community, with a greater focus on educational process (Tinto 1997).

The work of Bean and his colleagues (Bean 1980, 1983, Bean and Bradley 1986, Bean and Metzner 1985, Metzner and Bean 1987) has been somewhat inaccurately represented as an alternative approach to that of Tinto. It is based on the notion that student departure is analogous to turnover in work organisations (Bean 1980). Student behaviour is affected by student attitudes, which in turn are affected by student beliefs. Bean acknowledged the importance of student interaction and social integration but places emphasis on the effect on student behaviour of factors external to the institution. In examining the attrition of older, part-time and commuter students, he concluded that social integration with the college community is likely to have less effect than social variables from the outside environment,
although the influence of specific variables is likely to vary for sub-groups (Bean and Metzner 1985).

Cabrera, Castaneda, Nora and Hengstler (1992) found significant overlap between the theories of Tinto and Bean and concluded that the interplay between institutional, personal and external factors needed to be considered in developing programmes to prevent attrition (p. 161).

Johnson (1994), on the basis of her work in Canadian institutions, developed a model utilising concepts from Tinto, Bean and others, which proposes that students withdraw from undergraduate programmes on the basis of their academic performance and their psychological state. Psychological state (including such factors as satisfaction, goal commitment, institutional commitment and stress and fatigue) is influenced by campus integration and societal variables, such as social values and perceived employment opportunities. At the most fundamental level, student academic performance and psychological state result from an interaction between student personal characteristics (such as health, finances, family responsibilities, personality and age), their academic characteristics (study habits, study skills, educational goals) and institutional factors, such as pre-admission counselling, academic and personal support, student advising and faculty behaviour.

This emphasis on the interaction between personal, institutional and external/societal factors seems the most fruitful way to proceed but since the interface between these dimensions is so critical, it is more difficult to devise strategies with a comprehensive and sustainable impact than it is to focus on any one of the three elements.

Types of studies

Four broad categories of studies contribute to an understanding of student attrition and withdrawal. First, large scale quantitative studies of retention and/or performance and attrition provide indications of the broad categories or groups of students who are more or less likely to complete a course or unit of study. They may be national or state-based. Second, there are institutional studies of performance and/or attrition that may or may not include student withdrawal or discontinuance as one of a set of variables or student characteristics being examined. Third, a smaller number of studies seek responses from individual students about their reasons for withdrawal. Fourth, a number of studies have focused on students who may be called ‘potential withdrawers’, either because they have been identified as dissatisfied or as having unsatisfactory academic progress.

Most studies that focus on reasons for student withdrawal in any detail relate to a single institution, and may therefore be limited in the extent to which they are generalisable. Nevertheless, there is sufficient commonality to indicate the broad factors that contribute to student withdrawal but the factors are likely to operate to a greater or lesser extent in different institutions.

Some studies distinguish between involuntary withdrawal (through academic failure or formal exclusion) and voluntary withdrawal while others do not. While the voluntary/involuntary distinction is valid for some purposes, the two are clearly interrelated at the individual student level, where failure is often the outcome of a range of personal, social and institutional factors rather than lack of ability.
Most studies of the reasons for student attrition focus on withdrawal during or at the end of first year and this review reflects that emphasis. There are very few empirical studies on later attrition, although there are indications of relatively high rates of non-completion (defined as leaving the original institution) in later years of a bachelor degree and for postgraduate students (DETYA 1999). The research that is available indicates that reasons for withdrawal in later years differ somewhat from reasons for withdrawal in the first year.

**Institutional studies**

Different levels of analysis yield different perspectives on the reasons for non-completion. System level studies necessarily focus on aggregated data that loses the complexity and subtlety of the factors influencing non-completion rates. While institutional studies provide a sharper picture, given the diversity of course and student profiles, it is difficult to generalise from the results they provide. Within institutions there are important differences at the level of the course and the department that can illuminate more clearly the dynamics of interaction between the individual student—departing or persisting—that can only be gleaned from systematic case studies.

**Institutional surveys**

A 1986 survey at Flinders University (Power, Robertson and Beswick 1986) showed that ‘about one in seven students withdrew from their course during the year and another one in nine students failed at least half the subjects they completed’; three out of four students enrolled in the same course in second year; and most who failed intended to repeat failed subjects or transfer to another course, rather than withdraw altogether (p.7).

Students indicated that their reasons for withdrawing were primarily personal, relating to changing goals, financial reasons, work and family circumstances. Gender differences were evident and males (more so than females) tended to list job, course, and institution factors as influential. Mature age and special entry students who withdrew had difficulty coping with study and cited family commitments as reasons for withdrawing. Rural students complained that their course was not interesting and/or relevant and the staff impersonal and uncaring. They also listed finance as a problem.

Significant problems experienced by students in the study included allocating time between study, work, family and home duties (49%); the ability to cope with the workload (32%) and to reach the required standard of work (29%). Overall, social isolation was a problem for many withdrawing students. Students from homes in which a language other than English was spoken reported a higher level of problems overall, particularly academic difficulties.

A second report (Power, Robertson and Baker 1987) noted that attrition rates in first year were variable between courses, averaging one in three overall. Disadvantaged students were most at risk, although they had benefited from the special programmes provided by some institutions. Course commitment and academic preparation were found to be important determinants of students continuing on to second year. Most students viewed their tertiary experience positively; successful students were more likely to be satisfied with their courses and services and to make more use of them.

West et al. (1986) surveyed students withdrawing from full time higher education at Monash University. They found that major reasons for withdrawal were:
- factors associated with the institution, the course or students’ preparedness for study (43%);
- reasons related to finance or job (24%);
- personal reasons (15%);
- health reasons (12%); and
- factors associated with families, including distance and remoteness from home (6%).

A substantial number of first year students withdrew from their courses before April 30, primarily listing reasons associated with the course, institution or academic preparedness. For those who withdrew by the end of the year, additional factors such as finance were increasingly involved. Further examination revealed a high degree of alienation caused by being in the wrong course; attending under pressure from parents, teachers, etc; finding institutions cold and impersonal; being poorly prepared for university life; and being burnt out by the effort to get into their institution. A follow-up study of those who withdrew revealed that the majority returned to study, or intended to return; many of the rest were in full-time employment or part-time employment. Only 5% were unemployed or seeking work (West et al. 1986, p. 151). With a changed labour market, the pattern for those who withdraw in the late 1990s may look different.

In explaining the dynamics of the students’ choices to withdraw or persist, West et al. suggest an interaction of three major factors:

- the ‘problems’ experienced by students;
- the ‘cost/benefits’ of continuing versus withdrawing; and
- the ‘environmental pressure’ to enter in the first place or to persist.

The authors claim that predicting which students will drop out is a ‘waste of time’ and cannot easily be extrapolated from analysing these variables, because their effects are not simple.

A study by Sharma and Burgess (1994) included both full-time and part-time discontinuing students from a Victorian institution (although the sample was found to under-represent full-time students). Those who had initially deferred or taken leave of absence were excluded. Telephone interviews were conducted with people living in the metropolitan area and a mailed survey sent to other students and those who could not be contacted by phone.

External factors, including financial status, student motivation, employment conditions and personal/family situations were found to be most important in reasons for discontinuing (Sharma and Burgess 1994, p. 234), leading the authors to suggest that institutions should not expend too many resources in trying to alleviate perceived student attrition problems, especially as only 18% of respondents believed that the institution could have helped to continue studying, and nearly 80% said that they would consider re-enrolling in the future (with 63% saying they would consider the same institution). However, specific measures to ameliorate some problems of student attrition are suggested, including better pre-enrolment advice (almost one-third of the respondents felt they had enrolled in the wrong course); strategies to reduce student workloads; wider availability of student loans; and more regular and personalised staff-student contact to facilitate student motivation.
More recently, Ramsay, Tranter, Sumner and Barrett (1996) surveyed all commencing undergraduate students who withdrew from the University of South Australia during the first semester in 1995, and a control group who persisted with their studies during the same period. The survey was augmented by interviews with a small number of withdrawing students, and a small number of key student support staff. The University of South Australia has flexible admission policies and a high percentage of students who fall into at least one of the equity group categories.

Key findings included the following:

- The predominant reasons for withdrawal were personal, employment and financial issues, academic preparation and the course itself. They varied in importance for different equity groups.
- The majority of commencing students who withdrew in the first semester did so before the Higher Education Contribution (HECS) cut-off date.
- Students from a non-English speaking background experienced below average success but low attrition rates indicating, according to the authors, a high motivation to stay enrolled.
- Indigenous students, students with a non-English speaking background and external students reported the highest levels of concern regarding their university experience. External students and Indigenous students who withdrew were least likely to make use of available general support services.

A case study

In contrast to the survey approach, in-depth institutional studies within specific disciplines give a more fine-grained analysis of the reasons for non-completion. Schedvin (1985) for example, examined the withdrawal application forms of students who withdrew or took leave of absence from each of the first year courses at the Lincoln Institute of Health Sciences in Melbourne in 1982. In-depth interviews were conducted with 20 of the total number of 58 students. The group included both students who were described as ‘temporary’ and ‘permanent’ withdrawals, and students who had withdrawn at various stages of the first year.

Schedvin identified five basic (sometimes overlapping) patterns representing central reasons for discontinuing studies, although in quite a few cases, more than one type of problem had contributed to students’ decisions to leave (p. 160). The reasons were:

- commitment to a prior goal;
- the need for ‘time out’;
- reality-testing a career;
- specific academic difficulty which aroused strong latent fear of failure; and
- factors beyond the control of the individual, such as accident, illness, family crisis or lack of money for the continuation of study.
Students’ accounts of their situations illustrated the often-complex interplay of personal, social and family reasons for having chosen certain courses of study in the first place and then deciding to withdraw. Schedvin suggests that the first pattern (commitment to a prior goal) illustrates that students felt they needed a strong commitment to a course or career in order to invest the time and effort to complete it. Students in this category were enrolled in a particular course either because they had missed out on their first preference or they had inaccurate information about where the course would lead.

In health science courses, which relate to a specific career, Schedvin argues that reality testing is likely to be particularly important, especially as students are often confronted by challenging personal situations and expectations. About half of those interviewed cited experiencing negative reactions to their courses and prospective occupations as central reasons for discontinuing. The ‘heavy work load and busy timetable’ of health science courses may be additional contributing factors to dissatisfaction with these courses. The study found that students might voluntarily withdraw when they are experiencing difficulties with the academic work or frustration with their own performance. In order to avoid failure, they withdraw or defer. Sometimes, stress over performance results in illness and thus becomes both a reason and an explanation for withdrawing. Both school leavers and mature age students experienced anxiety about failing.

The role of ‘factors beyond the control of the individual’ was complex and in Schedvin’s view difficult to assess without taking account also of the individual’s commitment to the goal of completion and to the institution. Their role was often one of reinforcing or sometimes providing an excuse for a decision to discontinue.

**Relevance and limitations of international experience**

The predominant theories and models regarding attrition and withdrawal have been developed in the United States, and to a lesser extent in Canada and the United Kingdom. There are significant differences in the ways in which nations organise their systems of higher education and inbuilt assumptions in theories developed in the context of any one system serve to limit their applicability across systems. In particular:

- There are problems in generalising from overseas research. For example, many overseas institutions, particularly in North America, have an open-door admission policy. On the other hand, until 1998, Australian admission policies have been competitive in many fields of study.

- Different financial assistance arrangements for students may have an impact on models of student withdrawal. For example, Yorke (1999, p.3) suggests that student finance is almost taken for granted in the major United States models, whereas (up until October 1998) for many students in the United Kingdom the reality of their debt may not be immediately obvious in their early years.

- Comparisons of attrition rates across systems are fraught with difficulties. Bijleveld (1994) found considerable variation across systems in attempting to compare completion rates in higher education, and the system characteristics that affected them, across only four European countries.
While many of the basic motives for students discontinuing are common across the systems typically compared with Australia, care needs to be taken not to apply their results too readily to the Australian context.

**Methodological issues in researching non-completion in HE and VET**

Most Australian studies of students who have withdrawn have used a survey or questionnaire approach, sometimes supplemented by interviews of a sample of withdrawing students. Some have compared students who have withdrawn with those who have stayed. Some have not distinguished between voluntary and involuntary withdrawals. Most have included a fairly high proportion of students who return.

Studies of students who withdraw face a number of potential difficulties, including the following:

- There is a possibility of low response rates and hence possible bias if students are being followed up after withdrawal; mailed survey response rates in some studies are quite low.
- The ‘real’ reasons for withdrawal may be hidden. Braxton, Brier and Hossler (1988) sound a general warning about post hoc studies of reasons for leaving, suggesting that students may not be willing or able to give accurate reasons for leaving.
- Research in Canada (Johnson 1994; Johnson and Buck 1995) distinguishes between students withdrawing for personal reasons and those excluded by the institution. Findings of interest included the fact that two-thirds of withdrawing students did not complete required withdrawal forms, a situation interpreted by the authors as the result of some passive animosity towards the university because of cumbersome bureaucratic procedures (Johnson and Buck 1995, p. 74).
- Schedvin (1985) found that the reasons students give on formal applications for withdrawal and in response to questionnaires about reasons for withdrawal tended to simplify their grounds for leaving. The real reasons for discontinuing are often hidden, partly because neither application forms nor questionnaires invite complex explanations, and partly because there is a tendency to state ‘acceptable’ reasons for withdrawal (e.g. ‘illness’ may mask stress or fear of failure). Hall and Harper (1981) found some categories of response were more likely to be given in a questionnaire regarding withdrawal and others in an interview situation. Yorke (1999) found that responses in a telephone survey were significantly different from those obtained through a mailed questionnaire in the strength of the number of influences people identified.
- A proportion of students ‘disappear’ without making a formal application for withdrawal. Studies that utilise student exit surveys miss such students.

The data collection issues require us to consider carefully the quality of the data used to draw conclusions about non-completion. We know that trend data collected at the national level on reasons for non-completion does not exist in Australia. We know that conclusions as to the role different variables play in the process leading to non-completion are based primarily on single-institute studies. This is true also of the American studies cited by Cohen and Brawer.
Relatively few studies have used intensive interviews. Those that have strongly support the assumption we have made throughout, that decisions to withdraw are complex and result from the interaction of a number of factors.

Likewise, few studies of non-completion have been conducted across a representative range of universities and colleges. Methodological problems then come to the fore. Exiting students who are surveyed directly, and indeed face to face, by their teachers or lecturers are likely to be reluctant to criticise their course or institution, and are especially unlikely to criticise the teaching they have experienced. This has been shown to lead to an under-reporting of course-related factors (Martinez 1995 and Kenwright 1996). Response rates are likely to be low (29% in one case study cited). Items used are likely to vary considerably from study to study.

In the United Kingdom, in the rare cases where data on withdrawals, as extracted from surveys administered by teachers, are collected, these are often found to underestimate programme-related reasons, with students reluctant to criticise teaching or courses in front of their teachers (Martinez 1995). Moreover, these ‘ex post facto’ studies, as Macdonald (1984) designates them, have serious weaknesses relating to reliability and validity. There is reason to doubt that students are making the full picture known and some evidence that they may feel the need to rationalise their decision to withdraw.

Most importantly, perhaps, it is difficult to measure an institutional effect if the institutional dimension (as an independent categorical variable) is missing, as it must be in a single-institute study. Yet, a number of studies have reported an effect (OTFE 1996, NCVER 1998, Kenwright 1996), suggesting that institute-level factors play an important, but largely ignored, role in influencing completion rates. At the same time, it should be recognised that the development of items for such survey questionnaires can promote particular responses.

The classification of reasons for non-completion by researchers also presents a methodological problem. As we note later in our review of the reasons for non-completion, the interaction between personal and institute and course-related factors is often crucial. Motivational and attitudinal variables rarely operate in isolation from their institutional context. For example, the factor ‘studying problems’, under the broader heading of personal reasons, may be as much due to institutional barriers (poor instruction, cultural insensitivity, lack of facilities or resources for special needs students, etc.) as to any deficiency at the personal level. Similarly, attendance, timetable problems and language problems sit inappropriately in the list of personal factors where many researchers have placed them, given that these are factors over which institutions may exercise some control.
CHAPTER 4

STUDIES OF REASONS FOR NON-COMPLETION

Some relatively clear themes emerge from the literature on the reasons for non-completion in the VET and higher education sectors. The most important point to reiterate from the outset is that for the individual student it is relatively unusual for any single factor or event to be defined as the sole cause of non-completion. The mix of reasons for non-completion identified by Long et al (1995) from a review of Australian studies suggested six broad problem areas that consistently appear in the literature:

- problems with employment;
- problems with the course;
- health and chance events;
- institutional factors;
- financial problems; and
- family and other commitments.

These appear again to a large extent in one of the most substantial and recent studies (Yorke et al. 1997), which followed up students who had withdrawn from six higher education institutions in the North West of England. Three broad influences were dominant in the decision to leave:

- wrong choice of field of study;
- financial difficulty;
- dissatisfaction with aspects of the student experience.

More broadly, Yorke (1999) found six factors that reduce the complexity of the many and varied reasons students give for withdrawal:

- poor quality of the student experience;
- inability to cope with the demands of the programme;
- unhappiness with the social environment;
- wrong choice of programme;
- matters relating to financial need; and
- dissatisfaction with aspects of institutional provision.

(Yorke 1999, p. 39)

These categories have been addressed in the discussion that follows, although we have added variables that feature more prominently in the Australian literature and de-emphasised those that seem to be of more relevance to the United Kingdom and the United States. We have ordered the influences on non-completion partly to reflect the time sequence from recruitment to the experience and then to departure.
MAKING CHOICES

In the Yorke (1999) study, the most frequently reported influence on withdrawal for younger students in full-time or sandwich programmes was choice of programme or study. However, a crucial finding was that 56% of the respondents had (at the time of contact) already returned to study, and a further 18% were intending to do so. This points to a group of issues concerning students changing universities and courses. Yorke (forthcoming) lists in descending order the influences contributing most to this factor:

- wrong choice of field of study;
- lack of relevance of programme to career;
- lack of commitment to programme;
- programme not as expected;
- need for a break from education; and
- insufficient academic progress.

Career choice

Numerous studies have noted the association between withdrawal and students’ uncertainty about their career choice. Pascarella and Terenzini (1991), suggest that students less advanced or more uncertain in their career planning may be more likely to withdraw than those with advanced levels of career development (p. 425-6). It is clear that there is a link between age and more ‘advanced levels of career development’.

Further exploration of shifts in career choice is needed. Anecdotal evidence from student counsellors and others suggests that in some professional courses, such as medicine and teaching, students may persist to later years of study but become increasingly convinced that they have chosen the wrong career as they approach the end of their course. Although considerable personal (and institutional) investment has taken place to this point, there is evidence that the negative aspects of the choice begin to outweigh the push to continue and students will withdraw, or perhaps begin to fail. Decisions to discontinue because students come to the conclusion that they have chosen the wrong course can of course occur at any stage. Schedvin (1985) found this to be a significant factor for first year health science students withdrawing.

While ‘personal’ or external reasons for withdrawal are likely to affect students irrespective of their field of study, it is clear that attrition rates vary according to the subject and the field of study. Type of course is an important variable in predicting higher education performance (Clarke, Burnett and Dart 1994). It also seems that, while higher education performance is strongly related to secondary school performance overall, the relationship is more obvious for science than humanities subjects (McClelland and Kruger 1993). Similarly, the total ASAT score was found to be a better predictor of success for science students than humanities students (Everett and Robins 1991).
Choice of university

Many students are seriously under-informed on key issues in their choice of an institution. James, Baldwin and McInnis (1999) found that many applicants based their decisions on hearsay and word-of-mouth. They operate on main impressions formed of their preferred universities, ‘many of which are vaguely reputational, idealistic or limited to impressions of the campus buildings and surrounds’. Field of study preferences are the dominant factor in their decision-making.

The most used sources of information in this study were materials distributed by careers teachers (for school leavers only), Tertiary Admission Centre guides, and university open days (used more by school leavers than mature age students and more influential in their decision making). School visits to universities were also used by 45% of the school leavers and were a reasonably strong influence for almost 60% of school leavers.

McInnis and James (1995) conclude that the numbers of students who transfer between faculties (about 17% of students change their course or faculty, especially in the first and second years) bears witness to the inadequate preparation, inadequate information about courses of studies and prerequisites, and unclear expectations which especially first year students experience.

The notion of ‘wrong’ or ‘inappropriate’ choice by students needs further exploration. In some case, ‘wrong’ choices may result from student lack of accurate information or misunderstanding. In others, it may be the result of natural and positive changes in direction as school leavers gain greater maturity. So called ‘wrong’ choices are often not a choice at all. A substantial number of students do not gain entry to the course or subject of their first choice. Many students in science and arts faculties in first year are there so as to give themselves a second chance at entry for highly selective courses such as law or medicine. Warwick-James (1994) found that the most important determinant of whether a first year science student intended to withdraw or continue beyond mid-year was the reason the student had for enrolling in science. For many of the transfer/withdrawing students, science was not their first choice.

‘Wrong’ choices may also result from lack of fit between student learning styles and institutional practices. Errors in student choices, judgements and self-perceptions, may in fact result from unexamined issues of pedagogy, student assessment, curriculum design and student advising procedures (Seymour and Hewitt 1997). The authors found that many students with the ability and the desire to do science, especially women and students of colour, eventually made the decision to switch because they became frustrated with the ways in which courses were presented and organised.

Changing courses

Seymour and Hewitt (1997) conducted a major study across a number of campuses in the United States to examine factors bearing on the decisions of undergraduates at four-year colleges and universities to switch from science, mathematics and engineering (SME) majors to disciplines that are not science based. Although the study focused on students who switched courses rather than withdrew from study, it is included here because of its comprehensiveness, for the insights it offers into how the culture of a discipline affects
withdrawal, and because it relates to a broad field of study that has consistently shown lower overall SPU means in Australia than other fields of study.

The inquiry covered an initial seven campuses and a further six for validation; involved a comparison of ‘switchers’ and SME graduates; and included only those students who, on the basis of a scholastic aptitude test, appeared capable of handling the required SME course work. Information was gathered through hour-long personal interviews and small focus groups.

Findings of relevance to this review include the following:

- The same set of problems led to both ‘switching’ and to serious discontent among ‘persisters’; switchers and non-switchers did not appear to differ on ability, motivations, attitudes or study-related behaviours.
- The ‘survivors’ were distinguished from the switchers by their development of particular attitudes or coping strategies, both legitimate and illegitimate.
- Luck or chance, including support from a faculty member at a critical time, played a part in surviving.
- Reasons for switching and general concerns were similar across all institutions, despite their considerable variation as to size, mission, funding, selectivity or reputation.
- The main reasons for switching decisions were lack or loss of interest in science; belief that a non-SME major holds more interest, or offers a better education; poor teaching; feeling overwhelmed by the pace and load of curriculum demands. These were also cited as concerns by between almost one-third and three-quarters of non-switchers.
- Only four of the issues cited as contributing to switching decisions were not substantially shared with non-switchers, three of which related to underlying concerns about career prospects.
- Women and students of colour were lost from undergraduate science courses in disproportionately large numbers.

In Australia, Golding’s (1994) research concerning the movement of people from higher education to technical education institutions, although not concerned with non-completion (since by definition such people are continuing with their education), does identify why some students discontinued at university. The list for those moving is similar to those given by students in other studies of withdrawing or discontinuing students. They include the following:

- The student was uncertain and/or immature at the time of an attempt at university studies.
- The course was not enjoyable, interesting, relevant, practical or vocationally useful.
- The mode of teaching was not suitable and/or the learning environment was uncomfortable.
- The course was too expensive.
• The student got a job before finishing the course.
• The student was experiencing difficulties associated with circumstances of a personal nature.

THE QUALITY OF THE STUDENT EXPERIENCE

The poor quality of the student experience features in the influences on student decisions to leave their course and generally embraces the quality and style of the teaching, the level of support given by staff, and the organisation of the programme (Yorke 1999, p.39). Particular concerns that emerge include inconvenient timetabling and large classes (Yorke forthcoming).

Readiness to cope with the demand of the course

The relationship between (inadequate) preparedness and student withdrawal is well established. A variety of personal and academic factors may be subsumed under the general label of ‘preparedness’. Ozga and Sukhnanadan (1997), in the United Kingdom, found lack of preparedness to be associated with: unrealistic expectations of university life, reflecting a dependence on inadequate sources of information about higher education generally and institutions in particular; no clear orientation towards higher education; and a ‘reactive’ entry route rather than a pro-active choice of undergraduate life and study. In other words, some students are seriously naive about the requirements of university study and overestimate their preparedness.

Yorke (forthcoming) lists in descending order the influences contributing most to the inability of students to cope with the demands of the programme:

• stress related to the programme;
• difficulty of the programme;
• workload too heavy;
• lack of study skills;
• lack of personal support from fellow students;
• insufficient academic progress.

While the student has considerable personal responsibility for putting sufficient effort into their studies, failure to cope with the level and quantity of work is also attributable to poor selection policy of the institution, and perhaps a failure to provide effective teaching and appropriate academic support. It certainly suggests a weak link between HE/VET institutions and those responsible for preparing and advising students about their capacities and the demands of their chosen pathways.

The existence of a gap between students’ expectations and experiences of university life has been consistently identified as an aspect of the first year experience (McInnis and James 1995, Abbott-Chapman 1998, Pargetter et al. 1998) and as a factor associated with
McInnis and James (1995) found that 45% of school leavers believed the standard of work at university was higher than they had expected; 64% said that studying at university was more demanding than school; and only 36% thought their final year at school was a good preparation for university study. This is not surprising, given Killen’s (1994) finding of a mis-match between the expectations of lecturers and students concerning what was a reasonable workload for students outside of formal classes, with students studying for just over half the time that lecturers expected them to devote to study (p.206).

McInnis and James (in Pargetter et al. 1998) also examined the responses of subsets of a large sample of students at Australian universities involved in a study of the first year experience (McInnis and James 1995), specifically, those assessed as ‘uncertain’ and those assessed as ‘dissatisfied’, as well as a smaller subset of those who had considered deferring. The most obvious differences between the uncertain and the settled students was that firstly, those who had seriously considered deferring were much less likely to have come to university with a career in mind; and secondly, they were less clear about why they were at university.

The general conclusion was confirmed in a follow up of a sub-set of students into their second year. The students who were dissatisfied in first year but became satisfied in second year expressed growing goal clarity. They also reported increased enjoyment and more relish for an intellectual challenge. Importantly, improved satisfaction was closely associated with increasingly positive views of teaching quality, but the direction of causality is not clear.

**Academic and social integration**

Tinto’s notion of social integration and its impact on student persistence has achieved wide currency in the literature on student attrition. It has been found to be a more useful concept for first year than later year students (Neumann and Finaly-Neumann 1989), and to operate differently for residential than ‘commuter’ student populations (Pascarella et al. 1983a, Pascarella and Chapman 1983). Social integration had a positive effect on retention for non-traditional students, i.e. those who are older, working, perhaps married and not living on campus, but academic integration and career integration did not have such an effect (Ashar and Skenes 1993, p. 98).

Yorke’s (1999) factor of ‘unhappiness with the social environment’ is of a different order, referring to students who move from home to take up a place at university and find they dislike the city or town in which the university is located. While this certainly applies to significant numbers of students in the Australian context, it is less of an issue for most since there is considerably less mobility compared with the United Kingdom or the United States.

The degree of contact between students and faculty members and the quality of the contact is a strong contributor to academic and social integration and to student persistence (Pascarella and Terenzini 1980). Pascarella (1980) found that student informal non-class contact with faculty was linked to such educational outcomes as satisfaction with college, educational aspirations, intellectual and personal development, academic achievement, and freshman to sophomore year persistence in college.

Interestingly, Watkins (1981) found little evidence to support the notion that a relationship exists between student withdrawal and disparity of student and lecturer views on educational
matters such as assessment, assignment learning, the value of inquiry and the value of independent study. Christie and Dinham (1991) found that social integration was facilitated by both institutional and external experiences. Institutional factors included: living on campus (especially the opportunities for meeting other students, developing student friendships, gaining information about social opportunities on campus and shifting away from high school friends); and becoming involved in extracurricular activities.

Experiences with peers and family members, supportive or not of college attendance, also influence social integration and persistence in sometimes complex ways. The demands of family and friends outside the institution can limit opportunities for social integration (Christie and Dinham 1991). More needs to be known about the influence of peers and parents on students’ decisions to withdraw or to stay, and the different ways in which their social influence is exerted (Bank, Slavings and Biddle 1990).

Satisfactory peer relations appear to be associated both directly and indirectly with persistence, although they are possibly more important for females than males (Clarke, Burnett and Dart 1994). There is evidence that students seek out different types of networks that may variously act to increase persistence (Clulow and Brennan 1996). The authors found strong evidence that student relationship constellations exist. More than one type of relationship was sought in support of the student’s development, in relation to career, study and personal development. Where students identified people in their personal network who were contributing in a positive way to their study, responses correlated positively with decisions to persist with study, and with subject results.

It may be the case that for some students social integration occurs in the longer term rather than the shorter (Burgum, Martins and Northey 1993). These authors found that for a group of first year tertiary nursing students, background, individual attributes, prior experience and achievements, educational goals and academic integration were more important influences on academic outcomes than was social integration.

In universities, academic integration also refers to the extent to which students take on, or at least understand the values of the institution. Many first year students not only lack the requisite skills for university learning, they also lack abstract theoretical frameworks for organising the information they encounter. In addition, many students enter university and find that their world view, or common sense understandings, is in conflict with that of the university culture as a whole and with the philosophical stances and underpinnings of their fields of study in particular. For example, students imbued with a modernist world view entering the social sciences and humanities do not readily understand post modernist theories, which inform much contemporary thinking in these disciplines (Marshall 1999).

Brower (1992) found that the addition of life task variables to the variables in Tinto’s somewhat narrow model of college integration enabled a better prediction of the number of semesters students enrolled in college. He suggests that the process of conformity to institutional goals and values is measured by Tinto’s model but that academic performance ‘also depends on how students establish a niche in the university based in part on their own perceptions, goals, choices and actions’ (p. 444). His model of student persistence identifies seven life task domains:

- academic achievement;
- social interaction;
• future goal development;
• autonomy;
• identity formation;
• time management; and
• physical maintenance/wellbeing.

Integration involves the process of pursuing these life tasks within the university environment, and modifying them as a result of feedback from the environment. The seven life task domains fall into the two broad categories of achievement (doing well) and affiliation (being with others).

The quality of teaching

Establishing the relative importance of the quality of teaching is an obvious area for improvement that universities and colleges can directly influence.

It appears that for VET students, the quality of instruction is more important than for higher education students. This doubtless reflects the relative urgency and instrumental view of studies in the VET sector where specific skills are acquired in a relatively short period of time—in contrast to the minimum of three years commitment in the HE sector. ‘Classroom issues’ received the highest mean ranking amongst reasons for withdrawal in a study by Streckfuss and Walters (1990). This category included the quality of instruction and class sizes. This category was followed in rank order by the ‘lack of or poor college facilities’ and ‘personal reasons outside the college context’. Course-related issues, such as inaccurate expectations about the course content and difficulty fulfilling course assessment requirements, were found to make the least impact on students’ decision to withdraw.

Another study of attrition in a TAFE institute (Duball and Baker 1990) also noted the importance of teaching quality. The study found that drop-out respondents recorded significantly lower levels of satisfaction than persisters in two areas of institutional influence—student/lecturer relations and curriculum relevance. These less favourable perceptions related to such issues as the suitability of instructional methods, quality of instruction, the lecturer’s role in problem solving and the value of the course in terms of employment purposes. While causal directions could not be established in this study, the findings were sufficiently clear to suggest that such variables as student/lecturer relations and curriculum relevance can play a substantial role in the attrition process and that further research in the area is desirable.

Other Australian studies (Dunn 1995, Chan, Waters and Carter 1990) have found that a complex combination of personal, course-related and institute-related factors are responsible for student attrition within a variety of settings—Adult Basic Education, Adult Literacy Classes, External Studies, as well as mainstream vocational TAFE courses.

Detailed analytical work has also been carried out by the Office of Technical and Further Education (OTFE) (1996) in Victoria. Using a descriptive statistical approach, this study analysed completion rates in terms of three factors—factors associated with the individual, factors associated with the module/course, and factors associated with the institute. Amongst the findings of this study were that:
• smaller institutes had higher completion rates than larger ones;
• non-metropolitan institutes had higher rates than metropolitan ones; and,
• industry areas with large amounts of training activity (Business and Electrical/Electronics) had lower rates of module completion than did other industry areas.

Completion rates for Advanced Certificate courses were higher than for Associate Diploma courses. They were also higher for privately funded training, and for apprentices and trainees, as well as for students who had previously completed adult community education (ACE) courses. Completion rates also increase with age and are greater for those in full-time employment.

Another study, also commissioned by the OTFE and carried out by the NCVER, has attempted to use statistical modelling techniques to identify the influence of various factors on module completion rates (unpublished report, NCVER 1998). Similar findings to the 1997 study were noted, with the most pronounced effects on module load completion rates observed for field of study, stream of study, area of learning, industry, institute and funding source.

One of the strengths of these studies is their examination of the differences in module completion rates as between institutes, particularly given that these differences are significant. Neither of these studies, however, sought to link these factors to student-level attitudinal data. Therefore, conclusions as to the role of personal, course-related and institute-related factors, as reported by non-completers, in influencing the differences in completion rates as between different groups cannot be drawn.

A British study (Kenwright 1996), however, has gone some way in the direction of such research. This study of five further education colleges found that, although students usually gave a number of reasons for non-completion, there were large differences between colleges as to the relative weight given to any particular reason. For example, the proportion of non-completers who found their course unsuitable ranged from 21% in one college to 46% in another. Similarly, poor teaching was cited as a problem by 5% of non-completers in one setting and 17% in another. There may be a threshold of tolerance of poor teaching that explains these differences and is associated with non-completion.

**THE IMPACT OF ‘PERSONAL’ REASONS**

The notion of distinguishing between so-called ‘personal’ and institutional reasons for non-completion is conceptually meaningful but in practice is quite misleading. Likewise, making the distinction between ‘internal’ (that is, institutional–related) and ‘external’ factors causing non-completion is problematic. There are two aspects to this that should be noted. First, as we have already mentioned, it is unusual for students to cite just one factor influencing their decision to withdraw from studies. Second, there is the issue of where the institutional responsibility begins and ends. For example, making wrong course choices may be attributed to the poor quality of information provided to prospective students, or the lack of careers counselling. On the other hand, students can simply ignore expert advice and choose a particular course despite their lack of aptitude for the work.
A large body of research exists in the United States on personality and psychological factors associated with withdrawal (Cohen and Brawer 1970), reflecting in part the emphasis placed on individual factors in the past. Difficulties with personal autonomy have been associated with lack of persistence. Findings regarding personal locus of control (that is, whether individuals see themselves as externally or internally directed) and persistence are unclear (Clarke, Burnett and Dart 1994).

Going to university presents personal challenges that some students are not going to be able to meet. Fisher and Hood (1987) in the United Kingdom found that irrespective of whether they were residential or home-based students, all students showed evidence of raised psychological disturbance in the first few months of university, and homesickness was an issue for some.

In contrast to the focus on the student experience factors that feature in the HE research, much of the small body of VET sector literature on this topic argues that non-completion is primarily due to personal factors beyond the control of the vocational college. Cohen and Brawer (1996), for example, citing evidence presented in various American single-college studies of non-completion, argue that:

The reasons why students drop out are quite varied, but in general, most of them are related to situations beyond the college’s control (1996, p. 63).

They further argue that, for most students, no intervening college service could have prevented the withdrawal, although they concede that very early intervention might have helped with a small number of students.

Other researchers, including Oliveira and Rumble, who studied non-completion among distance education students in the United Kingdom, have come to very similar conclusions—‘that drop-out was caused by a range of factors, some of which have to do with environmental and motivation factors, and not with the quality of the learning experience offered’ (1992).

Some Australian studies in the VET sector also present evidence that personal factors are more important than course-related and college-related factors in influencing the decision to drop out. Hill (1991), in a study of attrition from a first-year TAFE electronics course, found that the major reasons for leaving a course fell in the sphere of the personal; he noted that teachers nominated lack of motivation as the prime reason for non-completion, while the students themselves nominated employment-related reasons. In Hill’s study, however, the issue of lack of motivation (nominated by teachers as the main reason for non-completion) is a double-edged one. It may relate as much to deficiencies in instructional methods as to any failure on the students’ part. Moreover, the second most popular reason nominated by both teachers and students was study difficulties. Again, the extent to which these are caused by the student and the extent to which they are caused by the instructional environment are not easy to disentangle.

In the United Kingdom, Beddow (1994) found that most withdrawals from adult evening courses were due to personal reasons, but that institutional expectations of high drop-out rates were behind a policy of over-enrolment. Similarly, Cullen (1994) and Wilkinson (1982) showed that non-completion that had been attributed to personal factors among students whose study had initially been interrupted due to illness or other temporary factors often became permanent as a result of fear at not being able to catch up with their work or
apprehension at not fitting in again. Therefore the initial reasons for non-completion shifts to a new set of forces.

Financial factors

Inability to survive financially is a key ‘external’ factor in withdrawing from higher education and there is clearly a cut-off point below which withdrawal may be inevitable. Yorke notes major differences in national contexts influencing the impact of finances. In the United Kingdom, financial considerations tend to more frequently influence the withdrawal of older students and working class students (Yorke 1999), although they also affect younger students without parental support.

In the United States a number of studies indicate that the effect of finances on withdrawal is quite complex. Cabrera, Nora and Castenada (1992) found that there were both tangible effects of student finances, i.e. whether the student received government financial aid or not, and intangible effects, i.e. the extent to which students assessed their financial needs as being met from financial aid and other sources, on student persistence and hence attrition. Tangible and intangible components were found to be intertwined but had differential effects. Although there were no direct effects for either component on student persistence, there were strong indirect effects.

Their findings indicated that receiving some financial aid facilitated students’ social interactions with other undergraduates. This in turn facilitates integration. The authors quote findings from other studies that suggest that scholarship holders are motivated to maintain a high level of academic performance, and in part this results from an increased commitment to the institution as instrumental in providing future opportunities for the student.

Cabrera, Nora and Castenada (1992) sum up the impact of financial aid thus:

… results appear to suggest that financial aid, and its concomitant attitude, is important not only because it equalizes opportunities between affluent and low-income students … but also because it facilitates the integration of the student into the academic and social components of the institution as well as by influencing his or her commitment to stay in college’ (p.590).

It is not clear whether this relationship holds for students in Australian higher education institutions.

Part-time employment

There is concern about the significant proportion of students whose connection with university life is limited by the amount of time they spend in part-time employment in order to support themselves through university (McInnis and James 1995). While unconnected or loosely connected students do not necessarily withdraw, there is a point of tension that may lead to withdrawal for some. Abbott-Chapman’s study in Tasmania (1998) found that employed students spent less time on campus, both in and out class, and that over three-quarters (76%) of students in paid employment described the income from their job as ‘essential’ or ‘important’ to the continuation of their studies. Paid work was the ‘main form of income’ for 29% of students (p. 233).
Time available for study is a key element in Weston’s (1997) ‘dual context’ model (the dual context referring to the model’s applicability to on and off campus students). She suggests that time availability because of outside-study demands on students’ time will interact with their academic ability, so that time availability will be less of a problem for high performance students.

The complexity of student incomes and their effect on retention and attrition need to be explored further. On the one hand, there is the possibility some employed students may be less integrated into the university, because of other demands on their time, more time spent off campus and fewer opportunities to become integrated into the life of the institution. On the other hand, employment, often in poorly paid and unchallenging work, may reflect commitment to and investment in succeeding in their studies.

Health and relationship problems

Students are exposed to a wide range of health and personal problems that may have as much to do with their ages and stages of life as their particular study experiences. Amongst the many variables influencing the decision to withdraw Yorke (forthcoming) lists ‘emotional difficulties with others’, ‘lack of support from family’, ‘problems with drugs/alcohol’ and ‘bereavement of someone close’. McInnis and James (1995) found that students who mentioned emotional health as a potential influence were more likely to also refer to financial problems, disliking their course, and disliking study (1995, p.50).

Competing commitments

American trend studies indicate a decline in the percentage of students who say that university has had an impact on their personal values. Indeed, on average, United States students in the 1990s seem to benefit less from university than previous cohorts, and there is clear evidence that student effort has decreased in the past decade. Students appear to be getting higher grades for doing less, and a culture of entitlement is widely reported (Kuh 1999). Students are now more materialistic and more expect university to help them achieve their instrumental goals (Astin 1997).

Most studies of withdrawal identify factors external to the institution that contribute to student withdrawal. The most common include illness, employment demands and family factors. Family circumstances tend to be more frequently a contributor for older rather than younger students, for female rather than male students and for part-time rather than full-time students. Family factors are important for mature age female students with children but especially for younger women with younger children (Scott, Burns and Cooney 1996).

The impact of family factors is significant in withdrawal for mature age female students with children (Scott, Burns and Cooney 1993, 1996). The authors found three major types of motives for attrition:

- A strong socio-economic class influence was linked to a combination of a lack of support from family for the mother’s study, lack of money, weight of domestic responsibilities and lack of knowledge or skills expected at university.
• Women who had been enrolled in non-traditional subjects (identified as economics, business and law) were relatively over-represented amongst discontinuing students. They noted lack of academic support or staff hostility as a reason for leaving.

• Younger students with younger children were more likely to leave because of family, financial or childcare related reasons and older women because of practical difficulties or course dissatisfaction.

Age

Age is significant with respect to the impact of external factors. Financial considerations, employment requirements and demands of family circumstances figure more prominently in reasons for withdrawal among older students compared with young students in most Australian studies and in recent English studies (Ozga and Sukhnandan 1997, Yorke 1999). There are some indications that the older the person, the more likely the person is to drop out (reported in the extensive review of predictors of performance in higher education by Clarke, Burnett and Dart 1994). On the other hand, increasing age is associated with clearer expectations about university and clearer choices about career (Yorke 1999). Age is often confounded with other factors. In some studies, it tends to become confused with ‘mature age’, which is often applied to students who do not possess normal entry qualifications (Clark, Burnett and Dart 1994).

Part-time and external enrolment

Of the students balancing study against other commitments, those enrolled part-time are amongst the most likely to withdraw from their courses. As a group, the attrition rate of part-time/external undergraduates is estimated to be double that for full-time undergraduates. This group embraces those with multiple factors contributing to their chances of discontinuing. They are older, more likely to be juggling other major responsibilities such as family and full-time employment, and it is also likely that they are particularly vulnerable to taking on ambitious workloads.

Reasons for off-campus students leaving are not, overall, significantly different from those of on-campus students, although there are mixed findings and ongoing debates about the importance of ‘internal’ and ‘external’ reasons (Eisenberg and Dowsett 1990, Long 1994). Long’s study of four Australian universities found that off-campus students generally had higher rates of withdrawal than on-campus students and differences in performance between on-campus and off-campus students were greater for students in their first year than later years. Sweet (1986) examined persistence as a factor in the continuance or discontinuance of distance education students; Keeghan (1986), in the United Kingdom, identified ‘push’ and ‘pull’ factors, which included family factors, finding the course difficult, high fees and difficulties with tutors. Most studies have found that the quality of the relationship with their tutors is an important factor for the continuation of distance students.

Traditionally, ‘life-factors’, i.e. those outside the control of the University, were found to be important for students in off-campus programmes at Deakin University during the academic years 1980 and 1981 (Edge 1982). Many students thought that their withdrawal was temporary. Most expressed an intention to return to study, and a large proportion had subsequently done so. Contrary to Edge’s findings, a more recent study in the same university by Brown (1995) found that factors ‘internal’ to the university were cited as major
reasons for discontinuation in a sample of off-campus students in the Faculty of Arts. Insufficient support from tutors and difficulties in contacting them were major contributory factors for a majority of the sample. Only those who left purely for reasons of employment change did so wholly for what could be termed factors ‘external’ to the university. Those who left due to changes in family circumstances, or for a combination of reasons involving family and employment, still cited problems with tutors as being an important impetus for discontinuing.

Garland (1993) found that both withdrawal and persisting students experienced situational, institutional, dispositional and epistemological problems that posed barriers to completion of distance education. He concluded that course content itself could not be ignored in any theoretical or practical consideration of distance education attrition. Dekkers, Bowser, and Cuskelley (1996) noted the impact of a factor specific to open learning students—students’ late receipt of study materials—on student attrition, academic performance and attitudes towards the university.

**THE TIMING OF DEPARTURE**

Withdrawal is also a process that occurs over time, and although the highest rate of withdrawal occurs during the first year of university, it is clear that it can occur at any stage of a study career, including during the process of decision making to go to university or immediately prior to the conclusion of a course. Parker et al. characterised withdrawals as ‘tree structures’, where students may drop out at various stages of the overall process (Parker et al. 1993). Seymour and Hewitt (1997) in the United States found that students often moved back and forth between thoughts of staying and leaving over periods from a few months to two years (p. 393).

Timing of departure is influenced by a number of factors, including the impact of administrative procedures related to such matters as payment of fees and HECS contributions (West et al. 1986) with a percentage of students withdrawing before the deadlines, and to institutional withdrawal policies. Avoidance of possible failure seems to lead to withdrawal later in the year or the semester. A number of studies from the United States support the finding that students who withdraw later in the semester experience more academic difficulties than those who withdraw earlier (Daubman et al. 1985).

However, contrary to expectations, these authors found that the later in the semester the student withdrew, the more likely he or she was to return the next semester. This is consistent with the explanation that they are withdrawing to avoid failure, and they opt to start anew the following semester. Nine out of ten students made a formal withdrawal. Importantly, two-thirds of the total did not discuss their decision to leave with any staff member, with women more likely to engage in discussion than men. Only 8% of students discussed leaving with a support service staff member.

Grierson and Parr et al. (1994) gathered data by questionnaire from students who withdrew from the University of Western Sydney (UWS), Macarthur between 1990 and 1993. The group included those who voluntarily withdrew, whether or not they intended to enrol at another university or college, but did not include students excluded from courses. Although the response rate to the questionnaire was only 25%, it was considered acceptable, given that
some students were being followed up several years after leaving and the sample was representative by age and faculty of the total group who withdrew.

Findings at UWS concerning the timing of withdrawal and lack of discussion with staff members are of particular interest. Student withdrawal was highest at the beginning and end of each year, as expected by the researchers, and three-quarters of students withdrew between November and April. They represented three groups of students:

- those who transferred to another institution after successfully completing a year at UWS;
- those who withdrew early in the first semester because of dissatisfaction with courses; and
- those who withdrew because of course failure.

The most common reasons for withdrawal were:

- leaving to attend another institution;
- problems of distance or travel;
- the course did not match expectations; and
- the course did not match the description in the course outline.

They appear to reflect the nature of UWS Macarthur at the time. The emphasis on problems of distance and travel reflected students concerns about the location of the two campuses and their inconvenience for private or public transport. The significant number leaving to attend another institution relates, according to the authors, to the perceived lower status of UWS Macarthur, relative to other universities, and possibly to the tendency of some students to make judgements on the basis of status rather than quality of education received.

The point of transition to university study is critical. In their sample of university students in one university, Ramsay, Tranter, Sumner and Barrett (1996) observed that for younger students, including school leavers, withdrawing to take up another course offer, or because of problems with induction or transition to the new institution, was common. The authors noted that the findings concerning induction and transition difficulties were somewhat surprising but might be explained by the fact that younger students were less likely to be affected by a number of the other grouped reasons and younger students may expect transition to university to be easier than they found it (p. 67).

GOAL FULFILMENT

Goal fulfilment refers to the extent to which students perceive their courses as fulfilling personal goals and leave when these have been achieved. It may represent a positive or a negative outcome for withdrawing students. For example, some students may withdraw because they feel that their studies are not helping them to achieve personal goals; others may fulfil their goals of gaining certain skills and then move into employment. Ramsay, Tranter, Sumner and Barrett (1996) report that the latter is the experience of Indigenous students who withdraw from courses at the University of South Australia. However, some caution is needed concerning the notion of goal fulfilment. Since a relatively high percentage of first
year students admit to some uncertainty about what their aims are, they may well begin by wanting to gain certain units and skills only but shift ground later on.

To again highlight the notion of students leaving because their goals have been met, Cohen and Brawer (1996) argue that non-completion, in many cases, reflects the achievement on the part of VET students of the educational objective for which they enrolled. They cite studies in the United States, which present evidence of up to three in four students stating that they dropped out because they had achieved the educational aims they held when they enrolled. Grubb (1995), however, questions the belief that drop outs leave because they have attained what they set out to achieve on enrolment. This, he argues, assumes that all students are able to plan and adopt a sophisticated strategy of maximising benefits by withdrawing when they have achieved what they wanted.

In conclusion, the review of research in this chapter probably does not give enough sense of the personal significance of leaving a course or institution before completion. A decision to withdraw is often difficult, and indeed, painful. As the period of investment of time and effort increases beyond the first stage—a month or perhaps year—it may on the one hand be more difficult; on the other, students may become clearer in their intentions about withdrawing. Withdrawal is rarely the result of a single factor, but it may be triggered by a particular incident or deadline. It is, in the end, a highly personal decision often taken in the face of parental and peer pressure, and in many instances, with some material penalties as well as damaged egos.
CHAPTER 5

STRATEGIES FOR REDUCING NON-COMPLETION

The focus in this chapter is on reviewing the range of strategies in use to reduce non-completion in the VET and HE sectors. It is not intended to propose models of what might work best. In most instances it is not possible to evaluate the effectiveness of the strategies on the basis of the reports. Indeed, independent and systematic evaluation of the outcomes of these programmes in Australia is relatively unusual and generally weak. Much of the institution level evaluation of support programmes, for example, is focused on inputs and levels of usage (McInnis 1996, 1998). As we note in our conclusions, identifying successful strategies should be a research priority.

In the United States there have been various attempts to set out an overarching framework for strategies to reduce non-completion. Tinto (1993) argues that since there are different forms of leaving, institutions’ preventative actions need to take account of these differences. Further, actions are of little use if they do not accord with the way in which a leaver understands his or her own behaviour. Institutional strategies to assist students need to be effective in counteracting the differing difficulties that students meet at various stages. They ‘must be timed to meet the changing situations and needs of students as they attempt to progress along the path to college completion’ (Tinto 1988, p. 451).

The six principles of institutional action proposed by Tinto (1993) are:

- Institutions should ensure that new students enter with or have the opportunity to acquire the skills needed for academic success.
- Institutions should reach out to make personal contact with students beyond the formal domains of academic life.
- Institutional retention actions should be systematic in character.
- Institutions should start as early as possible to retain students.
- The primary commitment of institutions should be to their students.
- Education, not retention, should be the goal of institutional retention programmes.

The studies discussed in the last chapter suggest that the broad reasons for withdrawal are relatively common across different ‘categories’ of students. They do, however, operate at different levels and have varying impacts for different groups, and institutional strategies need to take account of these differences.

If the Australian literature relating to non-completion in the VET sector is somewhat sparse, then it must be said that the literature relating to strategies for addressing non-completion is almost non-existent. Where the issue of strategies is raised in the Australian context, it is usually dealt with in a cursory manner. In contrast to HE there are no dedicated texts that list and evaluate strategies for dealing with non-completion in the context of detailed findings of research into non-completion.

This is not the case in the United Kingdom, where the extensive work of Paul Martinez in the field of non-completion in the VET sector stands out for its quality, comprehensiveness and
sheer volume. Martinez and Munday (1998) in particular give a succinct and comprehensive review of possible strategies for combating non-completion. Combining statistical modelling techniques, which give us the ‘where and when of student completion and non-completion’ (1998, p.10) with extensive qualitative survey data, the authors build a checklist of strategies for addressing specific factors identified in the authors’ research as contributing to non-completion.

Cleary and Nicholls (1998) suggest that prior to a consideration of strategies for addressing the problem of non-completion at the institutional level, three fairly obvious steps need to be taken:

1. Identify the extent of the problem.
2. Determine why students are leaving.
3. Identify which factors can be influenced and those, which cannot be or should not be influenced.

The issue of data collection, discussed elsewhere in this report, becomes a crucial one where reform is planned at the level of individual institutes. Given the differences between institutes in completion rates, accurate, detailed and up-to-date data are needed in order to identify and target the problems that need to be addressed (Martinez 1995, 1997, Grubb 1995, Teasdale and Teasdale 1996).

The problems identified in different institutions and the strategies devised to deal with them will, of course, be somewhat different in each case. Moreover, as Martinez and Munday (1998) emphasise, lists of strategies form only a starting point for detailed planning. We cannot treat them as blueprints for action, since the specific context of each institution will require its own set of responses.

Of relevance to both VET and HE, Martinez (1997) lists three broad fronts for action:

- managerial initiatives;
- curriculum initiatives;
- support initiatives.

In the sections that follow it is clear that most strategies to reduce non-completion are aimed at the recruitment and transition stages. The evidence suggests that this is the most effective place to concentrate resources.

**Strategies for appropriate recruitment**

**Information for students**

From the most recent study of students making choices about which university and course to take, (James, Baldwin and McInnis 1999) it appears that an alarming proportion of potential students are not in a good position to judge the appropriateness of courses for them. The quality of information that universities disseminate about their environment and courses must
be accurate, comprehensive, easy to follow and informative if students are to make effective choices. Information directed to students and others who may advise them needs to include:

- the characteristics of the academic experiences offered at an institution;
- the anticipated personal knowledge and skill outcomes; and
- the career possibilities and likely prospects (James, Baldwin and McInnis 1999).

Yorke (1998) sounds a warning about the effects of competition for students on the nature of information produced by some universities, where some publications in the United Kingdom have become more akin to ‘travel brochures’ than publications that provide accurate information for prospective students. However, irrespective of the quality of the information, it appears that students often make decisions about institutions and courses on the basis of factors other than full and accurate information.

The importance of materials distributed by careers teachers (for school leavers), Tertiary Admission Centre guides and University Open Days as sources of information (James, Baldwin and McInnis 1999) indicates that efforts should continue to be directed into these sources, particularly towards career teachers (or other relevant school personnel). In addition, a range of information sources is necessary, given the diversity of students.

In the previous chapter we cited the mismatch between student expectations and the course provided as an important reason for non-completion. It is no surprise then that one of the most important institutional strategies advocated for reducing non-completion is pre-course counselling. In most case, this involves easier access to detailed and comprehensive course information (Streckfuss and Walters 1990, Martinez, Houghton and Krupska 1998). In some cases, it may involve a complete review of admission procedures, as advocated by Kenwright (1996, 1997).

Munn, MacDonald and Lowden (1992) emphasise that face-to-face contact with an experienced teacher in the pre-course counselling stage can play an important role in preparing students for the demands of their programme. Kenwright (1996) notes that parents and teachers should also be targeted for receiving guidance information, given their important role in advising prospective students.

Martinez and Munday (1998) specify a detailed strategy relevant to both VET and HE which includes:

- better course publicity;
- links to schools;
- pre-course briefings;
- ‘taster sessions’;
- guidance;
- presentation of course overviews;
- clear entry criteria;
- initial diagnostic procedures; and
the use of current students to disseminate information.

All these strategies are applicable in the Australian context. It is wise, however, to note McGivney’s (1996) assertion that there are tensions between the need to provide accurate information and impartial advice on the one hand, and the pressure to achieve student enrolment targets on the other. Without management support for a policy of effective pre-course counselling, inappropriate enrolment will continue, with associated high levels of non-completion.

It is worth noting that an emerging trend is the professionalisation of the role of careers counsellors. While some will be based in schools it is likely that more private providers will emerge as the investment in HE and VET made by students and their families increases.

HE/VET-school links

Many universities have accelerated their efforts to build effective relationships with schools so that both students and teachers can be better informed of the options available for HE study as well as the demands placed on students when they get to university. At the same time, these links raise the awareness of academics and administrators about developments and expectations in the schools.

Links between schools and VET and HE institutions can serve to:

- promote career opportunities for young people;
- promote familiarity with the teaching and lifestyle in tertiary institutions;
- encourage clearer expectations about the nature, purpose and practices of higher education institutions;
- introduce young people to specific disciplinary cultures; and
- provide faculty members with opportunities to explore better links between their teaching and the teaching that takes place in secondary schools.

One such university programme includes:

- provision of work experience for year 10 students in various university departments;
- tours of the campus, including visits to specific departments, observation or practical classes and library orientation;
- residential visits to the campus for school camps which include a variety of academic and non-academic activities; and
- presentation of careers and course guidance to school students (Barwood 1989).

A short summer school workshop in a specific discipline area for interested secondary school students was shown to increase knowledge about the profession (electrical engineering), especially for females who had little prior understanding of the area (Ballard and Pudlowski 1989).
Unfortunately, it is often the case that mature age and part-time students do not have the same level of access to these programmes. Suggested strategies include:

- a variety of informational material directed at the community, with special attention to groups known to be sources of information for students or influential in their decision-making, such as careers teachers and parents;
- establishing and maintaining regional connections and industry links, as well as school links, in order to assist ‘pre-entry affiliation’ (Chappell-Lawrence 1998).

**Transition management**

Many of the strategies developed in relation to problems identified in the transition from secondary education to higher education are highly relevant to reducing student withdrawal. A comprehensive review of the burgeoning transition literature is beyond the scope of this review (e.g. McInnis and James 1995; Rae and Pozzobon 1993; Pargetter et al. 1998) and the volumes of papers from the Second and Third Pacific Rim Conferences on the First Year in Higher Education (Transition to Active Learning 1996; First Year in Higher Education: Strategies for Success in Transition Years 1998). Nevertheless, the main areas of focus and a representative sample of recent literature are included.

**Orientation programmes**

Pascarella, Terenzini and Wolfe (1986) explain the efficacy of orientation programmes in terms of anticipatory socialisation, whereby individuals come to anticipate correctly the values, norms and behaviours they will encounter at university (p. 156). However, with a diverse student population, it is essential that diverse sets of experiences be offered in any orientation programme (McInnis and James 1995). The following strategies have been found to be effective:

- Opportunities for students from different backgrounds to establish supportive personal networks are essential. Successful orientation activities include well organised Host Schemes and small student-led campus tours (Brown 1996).
- Orientation programmes for a diverse range of students are most effective when they are integrated, coordinated and holistic and involve a range of university personnel and a range of student experiences, both academic and social (Stewart 1998).
- Successful programmes involve students from later years in a variety of informational, supportive roles.

**Preparatory, bridging, foundation programmes**

Preparatory programmes have been developed to facilitate the goals of a mass education system, but they are also likely to contribute to retention, to the extent that they are able to address specific gaps in student study skills and information. Holgate (1994) suggests that programmes should be differentiated according to the different needs they are designed to address and the different teaching approaches required.

- Preparatory programmes are designed to develop generic skills and would normally be undertaken before beginning formal studies.
• Academic skills programmes address skills necessary in a specific subject area, especially in subjects or disciplines where the student has not studied before and would normally precede the beginning of formal studies.

• Bridging programmes aim to close the gap between what students already know and what they may need to succeed in a specific subject area. They would normally be undertaken before or at the beginning of university studies.

• Remedial programmes are generally attended concurrently with formal subject study and aim to help students overcome specific areas of difficulty.

Preparatory programmes are generally designed for special entry and/or educationally disadvantaged students (Cobbin, Barlow and Gostelow 1992; Murphy, Cobbin and Barlow 1992; Lewis 1994; Nouwens and Thorpe 1996; Nicholls 1998). An example of a preparatory programme for mature-aged educationally disadvantaged students is Macstart (Nicholls 1998). Entry to Macstart is by written application and interview. Students study for six hours a week over twenty-four weeks. The programme is largely successful in ensuring a satisfactory to above satisfactory performance for such students in their undergraduate programmes, although there are some variations across different faculties. The aim is to improve and formalise generic academic skills, and to have students gain some content knowledge in their future area of undergraduate study and become familiar with the university environment, practices and demands.

ASSIST (A Successful Start in Tertiary Study) is a non-credit course offered through the Open Learning Institute (OLI) at Charles Sturt University (CSU) to people thinking they may take on a degree course and are unsure that they have the ability. It is a ten-week course offered in distance mode. The course places considerable emphasis on learning skills.

Bridging programmes have been developed in a number of discipline areas; however, programmes in science/maths have received particular attention both in Australia (Rae and Pozzobon 1993) and overseas (see for example Gainen 1995), with particular emphasis on women. Research on conceptual understanding in the sciences has focused on identifying students’ misconceptions and on seeking to change them, the emphasis being on changing common sense conceptions.

The development of self-esteem and confidence is an important element in overcoming specific educational disadvantage and it is widely recognised that the most effective approaches for ‘at risk’ students include subject specific assistance, study skills and opportunities for changes in self-concepts. In some cases, the establishment of a programme of additional assistance has been shown to help self-concept as students report feeling more valued (Candy and Ducker 1989).

Teaching and learning responses to the problem of non-completion

Hepworth (1998) suggests that ‘to ignore curriculum theory for universities is to fail to understand both its theory and its practices’ (p. 15). Curriculum can be about transmission, transaction or transformation (Wilson 1988, cited in Hepworth 1998). It refers to the total offerings of an institution. Some argue that the first year experience for university students should offer a curriculum of transformation (Hepworth 1998).
In the VET sector, teaching strategies form the core of the responses described. Martinez, Houghton and Krupska (1998) identify a range of curriculum responses to non-completion. These approaches include:

- awareness raising and information giving among teachers;
- rolling programmes of teacher education and induction;
- courses to develop specialist skills;
- tutor development programmes;
- peer observation, feedback, mentoring and coaching;
- professional support and leadership from curriculum managers;
- systematic teacher development programmes to address local priorities; and
- action research in order that teachers can improve their practice in a supportive and collegial research environment.

Martinez and Munday (1998) advocate a system of monitoring, review and planning, fitting into a classical action research model. Within this system, monitoring of student needs and difficulties is linked to an on-going review of teaching and assessment responses, which will address these needs and difficulties.

The tailoring of course offerings to student needs is particularly an issue for disadvantaged students. Dunn (1995) advises flexibility in programme delivery as a key to improving completion rates. Students with special needs are often in need of flexible assessment procedures, sympathetic teaching styles and a greater flexibility in attendance and course completion timelines. For Indigenous students, such flexibility is often the difference been completion and non-completion.

**First year university teaching and learning innovations**

National policies developed to improve the quality of teaching and papers presented at recent international conferences on the first year experience attest to significant interest in teaching and learning innovation. Departmental initiatives and initiatives of individual staff members have been trialed or adopted on a long term basis in most discipline areas, often with the particular aim of improving first year retention rates.

General themes are:

- conscious attempts to assist a shift in students’ learning approaches towards more independent and self-directed learning;
- more diverse learning approaches;
- more collaborative learning approaches;
- a focus on the teaching/learning of underlying concepts;
- considered use of technology; and
- the rethinking of assessment methods and procedures.
Some representative examples are:

- attempts to assist the transition from pedagogical teaching (in secondary school) to self learning (at university) and to promote student understanding of (and tutor consistency in the use of) underlying concepts in a subject (Brennan, Fraser and Powell 1996, in relation to a first year Business degree subject);
- development of a model for a multi-disciplinary Bachelor of Applied Science that allows students to delay the decision on their science specialisation, and includes a first semester which consolidates secondary studies and builds a multi-disciplinary foundation for a wide range of science disciplines (Grenfell 1998);
- the incorporation of group learning and collaborative learning activities (Chaplin 1993) into elements of first year subjects;
- tutorials based on a collaborative, problem-oriented approach (James and Johnston 1996);
- the establishment of a physically appealing Resource Centre, incorporating a study area and assistance to first year students in a Mathematics Faculty, leading to the natural formation of study groups, the development of a sense of community within the Faculty, and the development of mentoring relationships (Blaskett and Hewett 1996);
- re-examination of ways in which the lecture format can assist student learning, e.g. taking students through the construction of a lecture as an example of how arguments are constructed (Chanock 1996);
- structured, in-context learning support based on an integrated cognitive, behavioural and social learning approach in order to assist students to shift to new learning modes and become independent learners in charge of their own learning (de la Harpe and Radloff 1998);
- an orientation field trip in order to facilitate goals of socialisation, enculturation and education (Jerome, Scott, and Thomson 1998);
- use of the web and online tutoring support in a multi-campus university (Burmeister and O’Dwyer 1996);
- changes to traditional forms of assessment that give comprehensive and regular feedback to students, in this case, in a unit with a predominance of Aboriginal students (Marshall and Liddle 1996).

Credit bearing foundation and transition courses

The notion of introducing an Australian version of the American Freshman 101 subject is increasingly under discussion in some universities. These courses are designed to orient students from diverse backgrounds in a mass higher education system to the nature and demands of university.

For example, in 1997 at Murdoch University there was an increase in the number of students who failed and were excluded from the university. In 1997 academic exclusions were two-thirds higher than for the same period the previous year, with first year students comprising the majority of students not continuing with their studies. The increase in exclusions coincided with lowering the entrance score for entry into the university.
Recognising that student retention is critical to its success, Murdoch took a number of steps to address student retention at the first year level. In 1997 the university approved a credit bearing unit, *A120: Introduction to University Learning*, as part of an action plan to enhance the transition of first year students into the university, and to retain students who were ‘at risk’ of withdrawing or failing. Several issues were important in making A120 a credit-bearing unit. Firstly, it was recognised that those students who are most ‘at risk’ usually do not have the time to attend voluntary classes, and that they would be disadvantaged if credit was not granted for the unit. Secondly, credit was necessary to provide a source of funding for the unit, which in turn was an acknowledgment that although students who were potentially at risk had been admitted, the university was confident of their ability to succeed and thus committed to supporting them (Marshall 1999).

**Higher education field of study responses to non-completion**

Concern about performance in science-based subjects has prompted the development of school, higher institutional and system-wide strategies. The extensive literature on efforts to increase women’s participation in non-traditional areas of female study in Australia, including science, mathematics and engineering, is not included here, except in general strategies towards increasing and enhancing the diversity of curriculum and teaching practices.

General strategies to improve performance and reduce attrition from maths and science courses include the following:

- The PDP (Professional Development Programme) at the University of California at Berkeley (Marcus, Cobb and Schoenberg 1996) resulted in significant shifts in the performance of minority students in mathematics and science and in their persistence to graduation. Workshops were established where participants worked together in groups on problem sets overseen by graduate instructors. Previously, these students experienced ‘social and intellectual isolation which eventually led to students’ demoralisation, disorientation, and ultimately, their decision to leave the sciences’ (p.67). The PDP aimed to create ‘viable and robust multi-ethnic student communities drawn together by a shared interest in and affection for mathematics’ (p.68).

- Changes in classroom climate and instructional style were identified as means by which to reduce student attrition from introductory courses in quantitative majors (Gainen 1995).

- Open learning strategies were developed to enhance life-long learning competencies (Fraser and Deane 1998).

- There is a significant literature that identifies the range of preparatory programmes, educational strategies, curriculum development and support services necessary to assist women in non-traditional fields of study. Overall, the value of generic initiatives and good teaching practices, as well as specific programmes in fields of study such as Engineering, are recognised (Cobbin 1995).

- General factors helpful in the survival of women and students of colour in SME (Science Mathematics Engineering) courses include regular personal contact with a faculty adviser who takes an interest in the student; small group learning; and departmental gatherings where faculty and students of different years meet and discuss topics of interest (Seymour and Hewitt 1997);
• ECSEL (Engineering Coalition of Schools for Excellence in Education and Leadership) is a nationally funded coalition of seven engineering schools in the United States, established in 1990, which aims to reform engineering education through transformation of the undergraduate curriculum and increasing the diversity of engineering graduates, including women and under-represented minorities (ECSEL: Years 6-10 1996). It is a multifaceted programme. Its goals are clustered in three programmatic areas:

1. The Learning by Design sub-programmes aim to create a more collaborative curriculum development environment; to work in partnership with the industry and professional associations and to enhance the curriculum at all levels.

2. The Community role targets retention of under-represented groups through work with teachers and through secondary school alliances. Extensive summer workshops held with secondary school teachers and subsequent follow up are aimed at facilitating the incorporation of ECSEL design-based activities into K-12 curricula.

3. Faculty and Student Development includes strategies aimed at institutionalising models whereby undergraduates play an ongoing role in engineering educational reform, programmes to encourage students in academic careers, and workshops and programmes for new and continuing faculty members. The career success of younger faculty members is facilitated, with a particular focus on women and under-represented minorities.

Integrated transition and retention programmes

Like many universities in the United States, the Pennsylvania State University has developed an integrated set of policies and strategies to increase retention. It is based on an analysis of the specific problems that are faced by some students e.g. inadequate academic skills, under-achievement, lack of preparation in some subjects. Many services are available to all students. The variety of retention programmes incorporate workshops, individual meetings with students, tutorial support, group study skills workshops, writing assistance, monthly meetings to discuss the concerns of adult students, drop-in tutorial centres with tutors available during the evening and weekends as well as during weekdays, and a week long pre-orientation programme for students of colour (Pennsylvania State 1996).

Of particular interest for this review are initiatives that follow up poorly performing and withdrawing students:

• letters sent to students who have withdrawn or ‘dropped out’ inviting them to revisit student services and talk with an adviser;

• early identification and follow up of poorly performing students;

• letters sent to students who have stopped attending classes advising them to withdraw (to avoid a semester of failing grades which could be a barrier to re-enrolment); and

• individual exit interviews with students.
Some of these initiatives may not be considered appropriate or consistent with the structure and organisation of higher education in Australia. Additional resources may well be required for this level of monitoring and follow up. However, if institutions and governments are serious about increased retention, such measures need to be considered.

Marcus, Cobb and Schoenberg (1996), in reviewing FIPSE (Fund for the Improvement of Postsecondary Education) programmes in the United States, summarise what they suggest are trends in transition and retention programmes:

- adaptation and application of strategies developed in other contexts to the special populations they service, e.g. the ‘learning community’ model adapted to retain beginning students in science majors;
- the use of personal support strategies to foster the acquisition of academic skills, e.g. discovery oriented laboratories; and
- establishment of creative and rigorous assessment strategies to demonstrate their superiority over standard treatments (which contributes to the institutionalisation of the more effective strategies).

A large retention programme for low-income and minority undergraduates at the University of California (Anderson 1978) was based on the following principles:

- Programme goals must be endorsed and supported by institution officials, and programmatic activities must be consistent with these goals.
- Retention begins with an ethically conducted recruitment programme based upon documented characteristics of persisters.
- To improve the flow of non-traditional students into colleges, alliances should be formed with feeder high schools.
- Orientation to the programme should take account of students’ unfamiliarity with institutional demands, occur over time, be thorough, give full information and provide experiences for students that orient them towards the institutional demands.
- It is important for students to identify with the programme without feeling stigmatised.
- The best retention services directly address the areas of greatest student anxiety and frustration.
- Retention programmes take the initiative in promoting and providing services.
- The value of the programme needs to be promoted to the institution.
- Programme management must provide a developmental perspective.

**Student support initiatives**

A wide range of student services have been linked to retention and avoidance of student withdrawal. Attempts to cut back on student services are likely to have an adverse impact on student non-completion. The experiences of students generally support the positive role that support services play in both prevention of attrition and the enhancement of students’
experiences whilst at university (Promnitz and Germain 1996). It is difficult to single out some services as more important than others, given the diverse range of personal reasons for student withdrawal and the importance of initial academic orientation and ongoing skill development in student persistence and performance. This section focuses on (a) recommendations and suggestions from the literature aimed at making those services more effective and (b) gaps, which have been identified, especially in avoiding premature leaving. In summary, services need to be well planned and managed; have a clear purpose; and be adequately and appropriately monitored and evaluated (Student Services Australia 1993).

Factors thought to promote better outcomes for students are institutional strategies that promote:

- better understanding by university administrations of the role of student support services within the general university community (Student Services Australia 1993);
- wider knowledge by students of the services the university provides (although it is acknowledged that many efforts are made to promote services);
- wider knowledge by staff of the services that are available to support their students (Abbott-Chapman 1998);
- closer liaison between academic staff and professional staff in student services so that all academic staff can refer students when appropriate; and
- services that are integrated and collaborative (Abbott-Chapman 1998).

Personal factors are often cited in the literature as being, by definition, beyond the possibility of an institutional response. Yet, as we have noted, difficulties with course progression are often a result of a complex set of factors involving both the student and the institution. It is no surprise to find a set of responses which include counselling, childcare support, referral to specialist help and financial support included among Martinez and Munday’s responses to the personal factors which contribute to non-completion. It is also not surprising that there are wide differences between institutions in the quality of the support they offer (McGivney 1996).

Nevertheless, the need for institutional responses to these personal factors has been well recognised at the college level. A study conducted by Barwuah, Green and Lawson (1997) in the United Kingdom showed that colleges recognise that identifying and responding to students’ additional support needs is crucial to improving student retention and achievement, particularly in the area of English as Second Language (ESL) learners. The study argues that in order to meet additional student needs, a shift of responsibility is needed from specialist to mainstream staff. All staff need to be aware of students’ additional support needs and to be able to address these through their mainstream teaching. The staff development implications of such a shift would be considerable.

Kenwright (1997) also emphasises the need to review guidance procedures and to provide support mechanisms such as counselling, welfare and financial advice and childcare centres. Kenwright (1996) and McGivney (1996) also give some prominence to the issue of financial advice and assistance, with Kenwright suggesting that students be given the opportunity to learn about personal financial management. Streckfuss and Walters (1990) also identify counselling services as the key to preventing non-completion.
Elsewhere, Kenwright (1996) argues for the development of a set of risk factors to be used in targeting support and advice to ‘high risk’ students, a review of admission and guidance procedures, the provision of financial advice, establishment of Retention Improvement Teams to draw up individual strategies suited to students and their courses and the development of strategies to improve student attendance and to respond quickly to poor attendance.

Dunn (1995) identifies early and on-going counselling as a key strategy to improve student retention. It is also observed that attrition rates are often higher among women and thus it is recommended that the twin issues of family support and childcare provision be also given high priority in such strategies. Finally, research on past school experiences and staff training and professional development are necessary actions to ensure the efficiency of any given student retention strategy.

Early intervention also plays an important role in the development of support initiatives. The early identification of target groups or individuals at risk and the quick implementation of adequate support strategies mean that those most in need can be given the necessary assistance before they decide to withdraw from the institution (Kenwright 1996). Part-time students are among the most vulnerable groups in this area (McGivney 1996). In the VET sector particularly, where enrolment may involve one module only or, at longest, a two-year course, rapid response is very important.

In the Australian context, a survey of TAFE students (Anderson 1996), although it did not focus specifically on non-completers, found that, without student services, over one in five students (and nearly one in three with special needs) might have dropped out of their courses. The services identified as most important, in rank order, were employment services (81.9%), information services (80.9%), facilities (79%), health and medical (72.1%), learning support services (70.5%), student association services (68.4%), financial assistance (68.3%) and counselling services (66.7%).

The most commonly identified problems related to making services and information about them more easily accessible, and two in three students believed that student representatives should be involved in the planning, management and evaluation of services.

Abbott-Chapman (1998) found that the more students say they enjoy their course of study, with the implied degree of ‘course commitment’, the less are they likely to use the various support services and the more are they likely to say they have no need of the services provided. The findings underline the need to try to involve academic staff to a greater extent than at present in a collaborative partnership with student services professionals (p. 238).

Student support service professionals are likely to have the most detailed knowledge of the variety of problems and student experiences that lead to withdrawal. Their insights and understandings are extremely valuable and have been used to good effect in producing easy to read, practical ‘how to’ books, firmly based on both a sound knowledge of subject areas and an understanding of real student experiences (Rhodin and Starkey 1998, Chesterman and Rhoden 1999).

Services and information for students with disabilities are generally under-developed. While generic information concerning adjustment to university study and the development of study skills is clearly relevant to students with disabilities, anecdotal evidence suggests that they face particular difficulties associated with the response of others to their disability. The extension of projects such as the information booklets funded by the Victorian Projects for
Higher Education Students with a Disability Committee through the Commonwealth Department of Education Employment Training and Youth Affairs (Al-Mahmood, McLean, Powell and Ryan 1998) offer a valuable model. The project has produced a series of booklets under the general heading of *Towards Success in Tertiary Study*, which includes Towards Success … discovering your learning style; with acquired brain injury; with Asperger’s syndrome; with deafness; with learning disabilities; with ongoing medical conditions; with psychiatric conditions; and with vision impairment.

**Learning Skills Support Programmes**

Australian universities and colleges have had a strong tradition of providing learning support programmes. Learning support is provided in universities under a variety of banners and is located in diverse organisational structures. The support may be centralised, faculty-based, integrated into a discipline context or provided through an academic staff development unit. Advantages and disadvantages of each of these arrangements have been identified (McLean et al. 1995). The authors suggest that, given the diversity of institutions, arrangements and populations served, it is most appropriate to set out guiding principles for learning support in higher education institutions:

- the need for a contextualised programme, and the consequent necessity of developing close cooperative links with faculty staff;
- the need to avoid a didactic approach, preferring to alert students to their individual learning requirements;
- the importance of maintaining a research link;
- the need to develop in students an awareness of the importance of being responsible for their own learning; and
- the importance of communication between units dealing with similar issues, which depends on a clear delineation of responsibilities, according to discipline, language background of the student (NESB/ESB) and the nature of the problem (McLean et al. 1995, p. 85).

With the increasing diversity of student populations in Australian higher education, Webb (1993) argues that learning support for students needs to recognise the following areas of marked differences between students:

- English language proficiency;
- approaches to learning;
- insight into the ‘hidden curriculum’;
- familiarity with the milieu of higher education;
- access to external supports;
- attitude to the ‘authority’ of lecturers; and
- knowledge of the convention of academic discourse and discipline-specific practices.

Effective strategies for learning support for non-traditional students are most likely to succeed if they are based on a student-centred, in-context and holistic pedagogy. Such pedagogy is
necessary to provide a link between access and success for non-traditional students (Webb 1993).

**Support services for Indigenous students**

It is thought that, in general, Indigenous students do not use the mainstream support services offered by universities because they are seen as being ‘both culturally and socially unresponsive to their needs’ (Morgan 1998). Strong arguments have been presented for integrated services specific to Indigenous students (Bourke, Burden and Moore 1996). The role of a range of preparatory, transition, academic and social support services in increasing the retention of Indigenous students has been consistently argued. Jordan and Howard (1985) argued three central functions for Indigenous Support Services:

- provision of academic support to fill in gaps in past educational experiences;
- provision of personal support to facilitate development of self determinism in education by introducing the student to social welfare networks; and
- provision of an environment, which promotes a positive sense of Indigenous identity.

The following specific services have been variously recommended (Abbott-Chapman 1993, Cobbin, Barlow and Dennis 1993b, Bourke, Burden and Moore 1996):

- cultural affirmation programmes;
- content of programmes and related career paths, prior to entry;
- orientation programmes, including the activities and skills expected of students and the time commitments studies demand;
- close monitoring of achievement, tutorial support, and academic advice and support;
- information and assistance regarding finance;
- a welcoming space in the university;
- the development of study skills;
- orientation to computers;
- ongoing advice with study and personal difficulties;
- information about administrative procedures likely to impinge on them, often at times of crisis; and
- liaison with employers and potential employers.

In addition, Bourke, Burden and Moore (1996) recommended that:

- support for Indigenous students at the University of South Australia be reorganised into one discrete unit offering academic, social, cultural and political support to all Indigenous students; and
- adequately staffed and resourced study centres are provided in areas where there is a high proportion of Aboriginal and Torres Strait Islander students in the population.

Institutional factors contributing to non-completion appear to be more prominent in the VET
sector than in HE. A fundamental difference here is that VET students (and part-time students in HE) share a common need for access to libraries, catering and car parking. The poor quality of facilities and services require managerial responses and resources (Martinez 1997, Martinez, Houghton and Krupska 1998, Barwuah, Green and Lawson 1997, Noel 1978, and Kenwright 1996).

For Martinez (1997), managerial time, attention and energy are the necessary pre-requisites to the implementation of any successful strategy to reduce non-completion. He argues that these are needed in order to make the issue of non-completion a priority within the institution’s overall policy and planning objectives. Kenwright (1996) argues the case for withdrawal procedures being administered by someone other than the student’s lecturers, since course related or lecturer related factors might be implicated in the withdrawal. Kenwright also stresses the need for on-going data collection from students via surveys of opinions and satisfaction, and better use and dissemination of management information within the college structure, so that all staff are made aware of problem areas and strategies for dealing with them.

In the American context, Noel (1978) too stresses the need for institution-wide structures dedicated to on-going research into the extent of non-completion problems and to the consideration and dissemination of strategies designed to address the issue of non-completion.

However, in the main, specific strategies at this level are absent from the literature, given that the role of management is largely one of policy making and guidance, while the actual implementation of strategies occurs at the level of course delivery and support services. For this reason, successful management strategies are mainly limited to staff development, flexibility in resource allocation and awareness raising.

**Mentoring, Peer Support, and Learning Communities**

Tinto’s (1975) work on social and academic integration emphasises the need for students to feel a part of the culture of the institution, particularly in the early stages of a course, when students are most vulnerable to dropping out. McGivney (1996) lists mentoring, peer support and improved induction strategies, such as group admissions and orientation courses, as possible means for better integration into the cultural life of the institution.

Mentoring and peer support are also nominated by Martinez and Munday (1998) and Bond (1998) as key strategies to address alienation and early problems settling in for VET students. Kenwright (1996) advocates mentoring by trained volunteer veteran students. Significant work has been carried out on the role of mentoring among university students, but relatively few examples are available in the VET literature, Bond’s work in Western Australia being one of the exceptions.

Mentoring has become a widely used retention strategy in the United States. In Australia, various forms of formal mentoring programmes have been developed, often to assist with transition issues. Arrangements whereby later year students assist first year students in various classroom, workshop, tutorial, and discussion group contexts are perhaps the predominant approach. Little is known about the incidence or the impact of informal mentoring relationships. The effect of mentoring on completion and non-completion has not been well explored.
The literature on mentoring reveals some lack of clarity in definitions and a variety of informal and formal arrangements that fulfil many functions (Clulow 1998). Overall, the functions reflect three major components of a mentor-mentee relationship: emotional and psychological support, direct assistance with career and professional development, and role modelling (Jacobi 1991, p. 510).

Although there is a widespread belief in the association between mentoring and academic success, and evaluations of particular programmes generally report some positive outcomes, there is still much to be learnt about which are the key elements that contribute to academic success and how they operate. Theoretical developments need to explore the relationship between the dynamics of mentoring and the dynamics of undergraduate achievement, e.g. their contribution to involvement in learning and to academic and social integration. There is also a need for more research about the interaction of gender and ethnicity on the development and outcomes of mentoring relationships (Jacobi 1991).

Student access to informal mentoring relationships appears to vary, with some of the variation related to different student populations, academic levels, institutional characteristics and fields of study (Jacobi 1991).

Mentoring is perhaps the most popular strategy to improve social and academic integration at the first year developed in Australian universities in the last five years. Well-planned programmes that incorporate peer support are important means of providing students with both academic and social support.

- Student volunteers can assist with practical information and general social support and understanding (Brown 1996).
- Pairing host nationals with new international students in their first year has been shown to result in paired students judging their first year experience as more positive than non-paired students and paired students more likely to use counselling and Language and Learning Unit services (Quintrell and Westwood 1994).
- Peer assisted study sessions (Kelly 1992, Thompson 1996), peer tutoring (McNamara 1994) and peer mentoring schemes (Martin and Turner 1996) contribute to the motivation, performance and retention of students.

Several programmes of peer assisted learning at Australian campuses are based on the related principles of Supplemental Instruction (SI) (Hamilton et al. 1994). The SI approach has been subject to close scrutiny and criticism in the Australian context (Clulow 1998) and there is considerable variation in its implementation. SI is differentiated from conventional tutoring and other forms of remedial assistance in the following ways:

- SI identifies high-risk subjects instead of high-risk students.
- SI promotes the acquisition of useful study skills within the framework of an academic subject.
- Participation in the SI programme is voluntary and open to all students in the subject.
- The SI leader attends all lectures for the targeted subject.
- The SI leader receives specific training in appropriate teaching and learning theory.
• The SI leader facilitates group study and problem solving rather than acting as an authority figure who re-lectures to the participants.

The success of such a programme depends on:

• the availability of a supervisor to oversee the programmes and provide feedback to students and SI leaders;
• selection of SI leaders who are strong academically, who have the ability to interact effectively with the group and who respond to students’ needs; and
• adequate training of SI leaders.

Structured, well-planned mentoring arrangements, with adequate training of mentors, have been shown to assist in the early adjustment of students and their ongoing learning environment (Jacobi 1991). Individual mentors have been employed in a wide variety of undergraduate courses. Mentoring arrangements:

• may be integrated with orientation activities (Hanley 1996);
• are more or less comprehensive in their organisation;
• are available to ‘at risk’ students or to all students on a voluntary basis;
• may operate across one subject or across a department; and
• may operate on an individual or group basis.

In establishing mentoring programmes, an action research approach (McKavanagh, O’Connor and West 1996) and continual monitoring and review (Cheah and Christie 1996) are likely to contribute to their greater effectiveness.
A Summary of Problems and Examples of Solutions

The following tables are adapted from a checklist developed by Martinez and Munday (1998) and include suggestions for action proposed by McInnis and James (1995) and Yorke (1999).

### 1. PRIOR TO COMMENCEMENT

<table>
<thead>
<tr>
<th>Reasons for non-completion</th>
<th>Strategies to reduce non-completion</th>
</tr>
</thead>
</table>
| Mismatch in student expectations and course demands | • Improve quality of information and dissemination  
• Links to schools  
• Pre-course briefings  
• Course sampling or taster opportunities  
• Interview guidance  
• Specialist guidance  
• Involvement of current students  
• Improve selection policy and practice |
| Inappropriate parental/ relative/ peer guidance and influence | • Parental/ relative/ peer involvement in open days and orientation activities  
• Briefing materials provided to parents, relatives and peers |
| Incorrect course placement | • Selection criteria and availability of aptitude tests  
• Induction programmes to include presentation of course goals and expectations  
• Early diagnostic assessment and feedback on progress |
| Withdrawals between application and enrolment | • Phone/mail contact and follow up strategies  
• Early tracking and follow-up procedures |
## 2. INITIAL ADJUSTMENT PROBLEMS

<table>
<thead>
<tr>
<th>Reasons for non-completion</th>
<th>Strategies to reduce non-completion</th>
</tr>
</thead>
</table>
| Early adjustment problems: including social isolation and sense of not belonging | • Orientation and induction programmes  
• Peer support/mentoring  
• Structured assessment tasks involving collaborative learning and group projects  
• Involvement of student union, clubs and societies  
• Common timetabling of groups  
• Planned group forming and team-building opportunities  
• Tutor training programmes |
| Early difficulties with quality and quantity of course demands | • Early feedback on academic performance  
• Tutor support programmes  
• Supplemental instruction  
• Provision of clear goals and objectives  
• Structuring of non-class study time  
• Review of teaching styles  
• Provision of sequenced work  
• Explicit integration of practical and theoretical |
| Basic skills problems | • Study skills programmes  
• Early screening and diagnostic tests  
• Integration of basic skills development with mainstream programme  
• Integration of learning support services and mainstream programme  
• Design and use of computer and web-based materials for self-instruction |
| Problems with motivation and progress | • Attention to the fundamentals of teaching  
• Monitoring and reporting on class attendance  
• Formal scheduling of tutor consultation |
| Personal and financial difficulties | • Raising awareness of the availability of support services e.g. employment, financial, healthcare  
• Clear role definitions for teachers/support staff |
CHAPTER 6

CONCLUSIONS: UNDERSTANDING AND REDUCING NON-COMPLETION

Improving the data

Determining the reason why individuals do not complete the course in which they enrolled is crucial, given that non-completion may be a decision with a range of outcomes, short term or long–term, negative or positive, as we have seen. Measuring the quality of the total learning experience for non-completers is also crucial if we are to have a clear idea of the effectiveness of HE and VET for all its participants, including non-completers.

No consistent national data is collected on the first of these aspects—the reasons for non-completion—and client satisfaction surveys are used only with graduating students, not non-completers. There is a need, firstly, for sensitive measures of non-completion, which ask the reasons for non-completion, and which also take account of the desired outcomes. These data should be collected nationally and on a yearly basis, in order to provide both a national perspective and analysis of trends over time.

Most important, there is a major and urgent need for longitudinal data, allowing the tracking of students through their studies and into their exit destinations, in order to provide a fuller picture of typical student pathways through their studies. This picture should build a history of typical behaviours, which may include leaving and re-enrolling immediately in a different course or institution, leaving and re-enrolling after some time or leaving having achieved the desired goals. Without longitudinal data, such a picture of typical patterns cannot be built.

Attitudinal data should also be collected from students both during their studies and after exiting their course. The data would be collected in a consistent manner, allowing comparisons between institutions, between states and over time, but it would also allow data relevant to the local context to be collected. This would allow the perspective of non-completers, as well as graduates, to be included in any evaluation of the system, thus providing a comprehensive client perspective.

There is also a need for sensitivity in data collection techniques, to avoid the well-documented problems of under-estimating programme-related reasons, with students reluctant to criticise teaching or courses in front of their teachers. Careful selection and training of staff to collect data, in order to overcome problems associated with students' concerns about lack of confidentiality, must play a part in this process. A further advantage of such a data-collection programme would be the ability to provide institutions with consistent local data, which identifies issues specific to that institution.
Institutional-level data gathering and strategies

There are generic problems related to withdrawal that are likely to respond to general strategies, especially strategies to assist the transition from secondary education to higher education. In addition, a range of institutionally specific strategies may need to be adopted, which relate to institutional differences in the nature of student populations, the location of the institution and course offerings. Pargetter et al. (1998) came to a similar conclusion about transition problems, seeing them as both generic, ‘especially in regard to changed teaching and learning environments and the match between prior expectations and early experiences (both academic and social)’ and the result of ‘a highly differentiated process in which a range of personal, social and institutional factors (and their complex combinations) produce highly specific pathways into tertiary environments which are themselves more and more diverse’ (p. 49).

While we have commented in this review on the difficulties of generalising from research about withdrawal based on individual institutions, there is a strong case for institutional research in regard to developing effective strategies. McConnell Castle (1993) suggests there are particular benefits from institutionally based research endeavours.

- Institutional approaches to attrition need to be based on data from the institution and its students to make them directly relevant to the institutional situation.
- A longitudinal trace for evaluating subsequent progress can be developed.
- Opportunities for campus-wide involvement are facilitated, an important factor related to successful retention, especially retention of minority students.
- Particularly if the research is action based, a more holistic approach is possible.

The way in which the issue is conceived, as one of retention, or of attrition has an impact on how institutions manage the problem. Education, not retention, should be the goal of institutional retention programmes (Tinto 1993).

This review of the reasons for student non-completion and strategies to reduce non-completion ultimately raises fundamental questions about the nature and purpose of HE and VET. The interest in transition issues and the first year experience that has been evident during the 1990s moved from a consideration of discrete strategies to much wider debates about institutional change and the nature of first year curriculum and learning. In a similar way, strategies to reduce non-completion should not merely be concerned with retaining students but with their educational experience in VET and HE institutions.

Directions for a research agenda

Any improvement in data collection along the lines we have suggested will provide a respectable platform for system-level research. Above all, there is an urgent need for a cohort study that:

- includes regular surveys/interviewing of a sample of students to explore in a detailed way how the general factors, which are relatively well known, operate at a personal level, and
• attempts to identify both the process and the trigger points for withdraw, and for return.

If we are to improve our understanding of the reasons for non-completion, there are also specific programmes of research such as the following that require support:

• Since so much research from the United States discussed in this review is focused on young students, there is a dearth of studies that examine in detail the reasons students withdraw in years later than the first year.

• Similarly, because Australia has had a much stronger tradition of part-time and external studies than comparable countries, the problems of persistence for these students are more significant. Given the rapid increase in the flexibility of course delivery there is a clear need to develop a major research agenda to monitor the reasons for non-completion amongst part-time and external students.

• The trend towards students disengaging from the university experience has been widely discussed (Astin 1997; Kuh 1999). This raises questions as to how well we understand the changing expectations of students. Research is needed to identify their attitudes towards withdrawal.

• It is most likely the case that department cultures in universities still support a belief that a high level of attrition is a desirable phenomenon. Systematic research on the values and processes in academic units would be useful.

• The issue of readiness for specific disciplines is obviously important and in need of further study. Such studies may add to understanding of the processes of withdrawal and the complex interactions between personal factors and field of study, and allow greater discrimination of more general variables such as SES background.

• Studies of those enrolling in an institution for the first time but recorded as having incomplete higher education experience, to determine their length of absence, reasons for returning, reasons for institutional choice. This raises a question relevant to institutional data collection—could the previous educational history of students be more systematically recorded across all institutions?

• Detailed studies of students going through administrative procedures, such as ‘show cause’ and academic progress reviews are needed to determine what might make a difference for them.

• With the expansion of higher education and the changing nature of the student population there is a need to reassess some of the conventional wisdom about the reasons for non-completion based on studies from over a decade ago.

• The meaning of non-completion is likely to change given the introduction of new technologies and the increase in uptake of flexible modes of delivery. This opening of opportunities needs to be investigated.

• Likewise, there is a need to systematically research and evaluate the use of flexible delivery modes as a strategy for reducing non-completion.

On a broader level, as the weight of materials provided in the review suggests, there is considerable value in making comparisons with trends and developments in other countries. However, the absence of ongoing national studies in Australia makes comparisons piecemeal
and relies on fortuitous rather than systematic comparisons. There is some merit in co-
ordinating a cross-national study with comparable national systems.

Finally, a glaring deficiency in the Australian literature is the lack of systematic and
independent evaluation of institutional strategies aimed at reducing non-completion. While
there is no shortage of activity and innovation, there is little useful data on which to make
judgements about the success, or otherwise, of teaching and support interventions adopted.
APPENDIX 1

1. Notes on patterns of group performance

It is clear that the type of statistical analysis on which national and state based studies of success, performance and attrition across a student population are based, is a different undertaking from seeking answers to the question as to *why* students withdraw from or do not complete higher education. Although it was not of direct concern for the review, it was inevitable that much of the literature would be derived from efforts to understand the reasons why specific groups have relatively high levels of non-completion. Such studies provide important information for further exploration of the relationship between withdrawal and certain student characteristics.

Shah and Burke (1996) used DETYA data to develop a model to study the movement of students in, through and out of higher education in Australia. General conclusions in regard to undergraduates include the following:

- A female student has a higher chance of completing a course than a male student who commences at the same age.
- The probability of completing a course for an Australian student varies from 58% for one who commences the course at an age between 25 and 34 years, to 74% for one who commences it at an age of 20 years.
- A 20 year old has the highest chance of completing a course, with the chances for a female being 79% and that for a male 69%.
- An Engineering student has the least chance of completing a course while a Law student commencing at the same age has the highest chance of doing so.
- A student who commences a course in Business or Engineering at an age of 24 years or more has a 50% or less chance of completing it.
- A female student takes less time, on average, to complete a course than a male student who commences at the same age, with the difference in the times as much as 0.7 years.
- A student who commences a course at an age of 21 years takes, on average, the shortest time (3.1 years) to complete it.

Some of these variations may relate to the student’s mode of study (full-time, part-time or external) and to credit transfer from other courses.

The most recent national study of undergraduate student performance is the third in a series of performance studies by the authors (Dobson, Sharma and Haydon 1998). The two previous studies (Dobson, Sharma and Haydon 1996, Dobson, Sharma and Haydon 1997) examined performance of commencing students at earlier points during the period 1993 to 1995. The 1998 report examines trends in enrolment and performance of commencing students during the period 1993-96, using the Student Performance Ratio (SPU Ratio) to indicate performance, and the SPU mean to compare sub-populations of students. The authors used data routinely supplied by institutions to DETYA. Comparisons were made between the performance of students in different Broad Fields of Study; for all bases of admission
categories compared with school leavers (the largest category), for internal and external students and by gender.

Findings regarding performance of commencing students included:

- Overall, female students in every state/territory outperformed male students.
- Internal students performed better than external students.
- Professional (and particularly health related Broad Field of Study students with high cut-off tertiary entry scores) produced the highest SPU means; Engineering, Business and Science students had relatively low student performance outcomes.
- Graduate entrants and entrants with an incomplete higher education course performed better than school leavers.
- Comparison between the performance of ex-TAFE students and school leavers produced mixed results, with the latter demonstrating a statistically superior performance in two states only.
- Similarly, school leavers produced statistically superior results when compared with mature age entry students in two states only.

State-based studies on the whole reflect similar trends regarding broad groups of students that succeed, with some variations according to coverage (commencing or across later years), measure of success and study focus.

McClelland and Kruger (1993) investigated the performance of students admitted through the Queensland Tertiary Admissions Centre in 1989-90. The study used as its measure of performance the proportions of variously assessed applicants who obtained an arbitrary benchmark progression rate of 75% of load attempted. A slightly greater proportion of those with previous tertiary experience attained the benchmark progression rate than other categories of assessed applicants. The performance of ATSI students was poorer overall whatever the basis of assessment, as was performance of students with previous tertiary experience who had been excluded or refused enrolment at some stage of their studies.

Price, Harte and Cole (1991) (see also Price and Harte 1993) found part-time, mature aged students were more likely to withdraw from the Northern Territory University, stating the difficulties of juggling work and study commitments as their main reasons for withdrawal. (The Northern Territory University has a much higher proportion of part-time students than most other Australian universities.)

Parker et al. (1993) studied the perceptions and subsequent progress of students who had received offers through the NSW Universities Admission Centre in 1991. The authors used a sample of four Government and two Catholic schools in three areas in NSW selected to give representation to students of low socio-economic background. They found that the overall TER scores of those who withdrew were generally lower. Withdrawal rates showed great variation across faculties.

Dobson and Sharma (1993a; 1993b) found that in Victorian universities returning students, full-time students, female students and students achieving high TES scores consistently produced the highest Student Performance Unit (SPU) means. The distribution of successful
results, as measured by the SPU, varied considerably across Major Discipline Groups with Science and Maths/Computing appearing to produce the lowest results in most institutions.

Lewis (1994) examined the progress of all undergraduate, domestic students who first enrolled at the University of Wollongong between 1990 and 1993. Of interest to this review are the following findings:

• School leavers on average, performed at a level almost identical to that of the entire student body.
• Those admitted on the basis of a completed or partially completed degree from another institution did particularly well.
• Special entry category and Aboriginal special entry students achieve results below the norm.
• TER is an important but imperfect predictor of performance, although higher TERs greatly increased the likelihood of success.
• Across all years and modes of entry, females outperform males.
• Place of birth (Australia or overseas) does not have a significant impact on performance when modes of entry, TER score and other variables are taken into account.

In a separate study, Dobson and Sharma (1995) used a Grade Point Average (GPA) measure, which takes account of the ‘quality’ of success. They found that, using this measure, undergraduate women outperformed men in nearly all disciplines, including Engineering and Science (Dobson and Sharma 1995) although the difference in the performance of women and men varied across institutions. The GPA analysis also suggested that while full-time students passed more subjects than part-timers (Dobson and Sharma 1993a), part-timers tended to get higher results in those subjects.

Apprentices and trainees

While there are particular difficulties in gathering data about the performance of apprentices and trainees as we noted in chapter two, the following is a summary of the limited findings available in the field:

• Although non-completion of traineeships is not always a negative outcome (given the skills that may have been acquired), non-completers who left a traineeship in 1996 and 1997 were only half as likely as completers to be in an unsubsidised job three months after exit (Grey et al. 1999).
• Low levels of initial education and previous unemployment are associated with high rates of non-completion (Grey et al. 1999).
• Age offsets some of the negative effects of low levels of education. Older students with little education have better employment outcomes than younger students with similar education levels. Education offsets some of the negative effects of unemployment (Grey et al. 1999).
55% of trainees left voluntarily, mainly for reasons of low wages, poor workplace relations and insufficient training. Trainees who left involuntarily usually did so for reasons of being laid off or the business going broke (Grey et al. 1999).

Apprenticeship completion is higher among early school leavers than among school completers, due to the greater tendency of school completers to transfer to other types of training or to higher education (Lamb, Long and Malley 1998).

Rural apprentices have higher completion rates than do metropolitan apprentices (Lamb, Long and Malley 1998).

2. Studies of specific sub-group characteristics

There is a substantial body of literature about the general performance and (less so) the attrition of various sub-groups or categories of students, especially in relation to educationally disadvantaged students (Schofield 1988; Abbott, Hughes and Wylde 1992; Magin 1993; Lewis 1994; McKenzie 1994; Ramsay, Tranter, Sumner and Barrett 1996), distance education students, Indigenous students and overseas students. This review refers to a sample only of that work. On the whole, reasons why students leave tend to be similar across different sub-groups, although they may be exacerbated or especially relevant for specific groups. What follows is a brief summary of findings from some of the research referring to sub-groups of students, including Indigenous students, a group whose probability of completion remains much lower than the average.

Indigenous students

Cobbin, Barlow and Dennis (1993a) found that the withdrawal and exclusion rates of Aboriginal students, predominantly mature aged women students, at the University of Western Sydney Nepean were virtually identical to those of HSC entry basis and mature aged students at the university. Men were over-represented amongst those excluded; no patterns regarding reasons for withdrawal can be ascertained from the information provided, although six of the ten females who withdrew did not complete any subjects and were retrospectively withdrawn without penalty.

The highest level of attrition for Aboriginal and Torres Strait Islander students at the University of South Australia, was among students who were:

- male;
- lived alone;
- studied on campus rather than off campus;
- did not enjoy their studies; and
- had not studied in the twelve months prior to commencing university (Bourke, Burden and Moore 1996).

Many students came to university to meet the expectations of their communities, but their desire to meet these expectations was not able to overcome the sudden adjustment to university life. Lack of early support, feeling isolated and feeling homesick were critical factors in the decision to withdraw. Economic factors were found to predominate in the
decisions of Indigenous students to discontinue and in decisions to study part-time (rather than full-time) at one institution (Morgan 1998). More fundamentally, the dominance of European cultural views and the exclusion of philosophical views of Indigenous and other cultures make for an inflexible learning environment that disadvantages Indigenous students (Slade and Morgan 1998).

Two recent DETYA reports (Anderson et al. 1998; Christensen and Lilley 1997) examine respectively the inclusion of Indigenous people’s rights and interest in higher education and alternative assessment for Aboriginal and Torres Strait Islanders at tertiary level. Ramsay, Tranter, Sumner and Barrett (1996) found attrition rates for Indigenous students were very high; those for external students were well above the University average; and there was considerable overlap among students in these two groups.

Students with disabilities

Relatively few studies have examined withdrawal of students with disabilities. There is some evidence that withdrawal rates are higher than for students in general, and highest for students who declare their disability (Bates 1998), although contact with a relevant student service lowers this rate somewhat. Bates (1998) found that personal reasons for withdrawal (particularly deteriorating health and financial problems) predominated for students withdrawing from the University of Tasmania. However, it is apparent from some of the detailed comments that greater institutional flexibility and more personal support may well have reduced some of the personal stress, anxiety and depression that led to withdrawal.

Special Entry students

Few studies directly address the question of why special entry students (as opposed to other categories of entry) do not complete university studies. More work needs to be done in this area. As suggested above, reasons for leaving and for not returning are likely to mirror those of other students to a significant extent. Two factors confound attempts to examine this issue, (a) special entry students can hardly be considered a homogenous group and are likely to come to their studies with very diverse backgrounds and experiences that could have an impact on retention and attrition and (b) special entry conditions vary across institutions, making comparisons difficult.

Fox (1986) in the United States found that for a group of economically and educationally disadvantaged students, academic integration was a more salient factor than social integration in their development, although the study did not clearly discriminate between academic failure and voluntary withdrawal.

An evaluation of the Special Admission Scheme (SAS) at Melbourne University, using data from the first three cohorts (almost 600 students) included the following findings relevant to non-completion:

- A healthy majority but proportionately fewer students (compared with non-SAS students) passed all first year subjects (p.146).
- They were more likely to withdraw from some or all of their subjects.
- Less than half with alternative year 12 qualifications completed first year without failure.
• Those at vocationally orientated courses were less likely to withdraw or defer.
• Success rates varied by faculty (Schofield 1988).

Students in the ACCESS Scheme at the University of New South Wales were found to have generally high retention rates (Magin 1993). One of the conclusions of the study gives an indirect indication of possible reasons for withdrawal. Student decisions to continue were directly linked to support services, especially to the provision of information about options available to them when they were experiencing academic difficulties; subject support for students under-prepared for a specific subject or course, and English language support for those with low proficiency levels in English.

Some of the conclusions of the study by Ramsay, Tranter, Sumner and Barrett (1996) of outcomes for various equity groups are likely to be relevant for some special entry students.

• Equity group students who withdrew raised more concerns about time management difficulties, general transition concerns and lack of adequate understanding of expectations at university than did equity group students who persisted.
• Equity group students who withdrew were more likely to indicate problems of combining paid work and study commitment and financial problems than were those who persisted.
• Employment and financial issues were a major consideration for older students who withdrew, including special entry students.
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