

1-1-1996

## The variables related to attrition and persistence of distance education students enrolled in the fourth year of the Bachelor of Education course

Eileen Thompson  
*Edith Cowan University*

Follow this and additional works at: <https://ro.ecu.edu.au/theses>



Part of the [Educational Assessment, Evaluation, and Research Commons](#)

---

### Recommended Citation

Thompson, E. (1996). *The variables related to attrition and persistence of distance education students enrolled in the fourth year of the Bachelor of Education course*. Edith Cowan University. Retrieved from <https://ro.ecu.edu.au/theses/939>

This Thesis is posted at Research Online.  
<https://ro.ecu.edu.au/theses/939>

# Edith Cowan University

## Copyright Warning

You may print or download ONE copy of this document for the purpose of your own research or study.

The University does not authorize you to copy, communicate or otherwise make available electronically to any other person any copyright material contained on this site.

You are reminded of the following:

- Copyright owners are entitled to take legal action against persons who infringe their copyright.
- A reproduction of material that is protected by copyright may be a copyright infringement. Where the reproduction of such material is done without attribution of authorship, with false attribution of authorship or the authorship is treated in a derogatory manner, this may be a breach of the author's moral rights contained in Part IX of the Copyright Act 1968 (Cth).
- Courts have the power to impose a wide range of civil and criminal sanctions for infringement of copyright, infringement of moral rights and other offences under the Copyright Act 1968 (Cth). Higher penalties may apply, and higher damages may be awarded, for offences and infringements involving the conversion of material into digital or electronic form.

## USE OF THESIS

The Use of Thesis statement is not included in this version of the thesis.

**THE VARIABLES RELATED TO ATTRITION AND  
PERSISTENCE OF DISTANCE EDUCATION STUDENTS  
ENROLLED IN THE FOURTH YEAR OF THE BACHELOR  
OF EDUCATION COURSE**

**Eileen Thompson B. Ed., Grad. Dip. App. Sc.**

**EDITH COWAN UNIVERSITY  
LIBRARY**

**A Thesis Submitted in Partial Fulfilment of the Requirements for  
the Award of  
Master of Education  
at the Faculty of Education, Edith Cowan University.**

**Date of Submission: February, 1996**

## **ABSTRACT**

The extent to which a range of demographic, academic and administrative variables are related to attrition and persistence of external students enrolled in the Fourth Year of the Bachelor of Education course during second semester, 1995 are investigated in this study. The applicability of the sub-scales and scales developed by Kember, Lai, Murphy, Siaw and Yuen (1995) for distance education students is also reported on for the study group.

Data were obtained from the student records system and two self-administered mail out questionnaires. The study population was predominantly female, in their early thirties, living in Western Australia, had completed their first teaching qualification nearly nine years ago and had subsequently had six years teaching experience. They were mostly classroom teachers who were studying part-time, were less than half way through the course, had not previously withdrawn from a unit and were achieving satisfactory results. Those students who withdrew from their studies had less teaching experience, had completed fewer units and semesters of study, and had lower course averages than the continuing students. The majority of students indicated that work, family and study commitments were the main reason(s) for their withdrawal. Withdrawn students were much less satisfied with the level of communication with the tutor and a greater proportion of these students rated assignment feedback as very unsatisfactory.

A series of sub-scales and scales constructed from the Distance Education Student Progress (DESP) inventory using factor analysis indicated a wide range of variables underlie the reasons why students withdraw or persist in the course of study. These scales and sub-scales are appreciably different to those reported by Kember (1995).

The study found that the attrition rate of students studying in the Fourth Year of the Bachelor of Education may be reduced if the unit materials were mailed by a date

that ensured most students would receive them prior to the commencement of semester. Tutors need to initiate communication with their students early in the semester. The due dates for assignments should be planned to enable students to receive feedback on their first assignment before having to submit their next one. Assignment feedback needs to be critically constructive and tutors need to provide positive suggestions on how future assignments might be improved. The university should consider offering Bachelor of Education units during the school vacation periods in addition to the normal semester.

**DECLARATION**

I certify that this thesis does not incorporate without acknowledgement any material previously submitted for a degree or diploma in any institution of higher education; and that to the best of my knowledge and belief it does not contain any material previously published or written by another person except where due reference is made in the text.

Signature ....  ....  
Date ..... 15-2-96 .....

## **ACKNOWLEDGEMENTS**

I would like to acknowledge the contribution which the following people have made towards the completion of this study:

Associate Professor Len King, my supervisor, for his constructive criticism and suggestions throughout this study.

Associate Professor Tony Knight, Denise Chalmers and Ken Retallack for their advice during the early stage of the study.

My husband Graham for his advice and support, and together with my two sons, Scott and Wayne, for their encouragement and patience during this time.

In addition, I express my gratitude to the Division of the University Learning Systems for financial support to conduct this study.



# **TABLE OF CONTENTS**

<b>TABLE OF CONTENTS</b>	<b>1</b>
<b>LIST OF TABLES</b>	<b>4</b>
<b>LIST OF FIGURES</b>	<b>5</b>
<b>CHAPTER 1. INTRODUCTION</b>	<b>7</b>
<b>BACKGROUND TO THE STUDY</b>	<b>7</b>
Higher Education	7
Distance Education	9
Attrition in Distance Education	11
Attrition and the University in the Current Study	12
<b>NEED FOR THE STUDY</b>	<b>14</b>
<b>STATEMENT OF THE PROBLEM</b>	<b>15</b>
<b>SIGNIFICANCE OF THE STUDY</b>	<b>17</b>
<b>DELIMITATION OF STUDY</b>	<b>18</b>
<b>DEFINITIONS</b>	<b>18</b>
Distance Education	18
Enrolled Students	18
Withdrawn Students	18
Mixed Mode Student	19
<b>OUTLINE OF THE STUDY</b>	<b>19</b>
<b>CHAPTER 2. LITERATURE REVIEW</b>	<b>20</b>
<b>INTRODUCTION</b>	<b>20</b>
The Significance of Attrition	20
Defining Attrition	21
Magnitude of Drop-out	23
<b>STUDENT PROGRESS IN HIGHER EDUCATION</b>	<b>24</b>
Background	24
The Developing Concern for Attrition from Higher Education	24
Spady's Model of Drop-out from Higher Education	25
Tinto's Model of Drop-out from Higher Education	27
Research Studies Resulting from these Early Models	31
Pascarella's Conceptual Model for Research on Student-faculty	
Informal Contact	34
Bean and Metzner's Conceptual Model of Non-traditional Student Attrition	36

<b>STUDENT PROGRESS IN DISTANCE EDUCATION</b>	<b>39</b>
Background	39
Defining Characteristics of Distance Education	40
The Development of a Model of Drop-out from Distance Education	41
Billing's Model for Completion of Correspondence Courses	44
Kember's Initial Model of Drop-out from Distance Education	47
Kember's Revised Model of Student Progress in Distance Education	49
Explanation of Components of Kember's (1995) Model	50
Testing of Kember's (1995) Model	55
Incorporation of Data Sources into the Model	57
<b>CONCLUSION</b>	<b>59</b>
<b>CHAPTER 3. METHODS</b>	<b>61</b>
<b>DESIGN</b>	<b>61</b>
Description of the Study Design	61
Rationale for the Study Design	63
<b>DATA SOURCES AND INSTRUMENTS</b>	<b>64</b>
<b>SUBJECTS</b>	<b>66</b>
<b>PROCEDURE</b>	<b>67</b>
Prior Approvals	67
Pilot Study	67
Main Study	68
Reliability and Validity	69
<b>DATA ANALYSES</b>	<b>70</b>
<b>CHAPTER 4. RESULTS</b>	<b>73</b>
Background Characteristics	74
Withdrawal Dates	78
Reasons for Withdrawal	79
Benefits to be Gained from Completing the Course	79
Difficulties Associated with Studying Externally	80
Relevancy of Unit Materials to Professional Needs	82
Course Administration	84
Aspects of Life Adversely Influencing Studies	86
Methods of Communication with External Studies	88
Communication with Tutor	89
Relationship of Variables Known at the Beginning of Semester and Student Withdrawal from Units	92

Relationship of Variables Known at the End of Semester and Student Progress	93
THE DESP INVENTORY	94
First Order-Factor Analysis	94
Second Order-Factor Analysis	98
Discriminant Analysis using Kember's (1995) Sub-scales and Scales	99
CHAPTER 5. DISCUSSION	102
PROFILE	103
WITHDRAWAL	107
Timing of Withdrawal	107
Reasons for Withdrawal	108
DIFFICULTIES OF STUDYING EXTERNALLY	110
APPLICABILITY OF UNIT MATERIALS	113
EXTERNAL STUDIES ADMINISTRATION	113
COMMUNICATION WITH TUTOR	114
Compatibility of Results with those of Kember's Model	117
SUMMARY AND CONCLUSION	121
Recommendations	124
REFERENCES	125
APPENDICES	130

## **LIST OF TABLES**

Table 1.1 Turnstile to reference date enrolment (EFTS) attrition	13
Table 3.1 A summary of the data sources used in the study	65
Table 4.1 A comparison of the demographic characteristics of continuing and withdrawn students	75
Table 4.2 Written responses for reasons for withdrawal expressed as a percentage of total number of students withdrawn	79
Table 4.3 Aspects of life that adversely affected studies:  A comparison of perceptions before semester commenced compared to perceptions towards the end of semester for continuing and withdrawn students. Values are expressed as percentages.	87
Table 4.4 Discriminant analysis to determine the variables known at the commencement of the unit that are associated with withdrawal	92
Table 4.5 Discriminant analysis to determine the variables known at the completion of the unit that are associated with withdrawal	93
Table 4.6 Factor analysis to produce sub-scales in the DESP Inventory	95
Table 4.7 Factorial structure of second-order analysis of each sub-scale	97
Table 4.8 Discriminant analysis of the 15 sub-scales for withdrawal based on the DESP inventory	98
Table 4.9 Discriminant analysis of Kember's (1995) sub-scales for withdrawal based on the DESP inventory	99
Table 4.10 Correlation of scales and sub-scales of the DESP inventory with withdrawal rates	100
Table 4.11 Second order factor analysis of Kember's (1992) 15 sub-scales	101

## **LIST OF FIGURES**

Figure 2.1 Spady's explanatory sociological model of the drop-out process (Spady, 1970, p. 79)	27
Figure 2.2 Tinto's conceptual schema for drop-out from college (Tinto, 1975, p. 95)	28
Figure 2.3 Pascarella's conceptual model for research on student-faculty informal contact (Pascarella, 1980, p. 569)	35
Figure 2.4 A conceptual model of non-traditional student attrition (Bean & Metzner, 1985, p. 491)	37
Figure 2.5 Billings' model for completion of correspondence courses (Billings, 1988, p. 25)	45
Figure 2.6 Kember's initial model of drop-out from distance education (Kember, 1989, p. 286)	48
Figure 2.7 Kember's revised model of student progress in distance education (Kember, 1995, p. 55)	50
Figure 4.1 Current occupation of study participants	76
Figure 4.2 Geographic location of study participants	77
Figure 4.3 Withdrawal dates	78
Figure 4.4 Ranking of perceived benefits associated with completing the course	80
Figure 4.5 Ranking of perceived difficulties of studying externally	81
Figure 4.6 Ranking of encountered difficulties of studying externally	81
Figure 4.7 Perceived applicability of unit materials to professional needs	82
Figure 4.8 Encountered applicability of unit materials to professional needs	83
Figure 4.9 Level of satisfaction with External Studies for enrolment procedure	84

Figure 4.10 Level of satisfaction with communication with External Studies for administration issues	87
Figure 4.11 Main method of communication with External Studies	90
Figure 4.12 Main method of communication with tutor	91
Figure 4.13 Level of satisfaction with communication with tutor	92
Figure 4.14 Level of satisfaction with assignment feedback	93

## **CHAPTER 1. INTRODUCTION**

The extent to which a range of demographic, academic and administrative variables are related to attrition and persistence of external students enrolled in the Fourth Year of the Bachelor of Education during second semester, 1995 are examined in this thesis. These variables are examined in the context of contemporary models used to explain external student drop-out. Recommendations are made on how attrition levels in this course might be reduced by changes in university practice and procedures.

The introductory chapter discusses the recent trends in higher education in Australia and the impact of these changes on the growth and development of distance education in universities in Australia. The need for the study of students enrolled externally in the Fourth Year of the Bachelor of Education course is discussed from the perspective of both the institution and the students. Following the statement of the research problem and the study objectives that are being addressed, the significance of the study for the students, and the university academic and administrative staff is discussed. The research is further clarified by a statement of the delimitations of the study and the significant terms used.

### **BACKGROUND TO THE STUDY**

#### **Higher Education**

In the last three decades, higher education in Australia has undergone a transition from a university system to a binary system to the current unified national system (Treyvaud & Davies, 1991). Traditionally, the major roles of universities were recognised as the development of knowledge and the expansion of research. By the 1960s, the post war population growth and the increased recognition by the community

of the need and value of education beyond secondary school level resulted in a three year Commonwealth Government enquiry to identify how best to cope with the increased demand for higher education. The resulting Martin Report made several recommendations that still form the foundation of national policy on higher education.

These were:

- Education should be regarded as an investment which yields direct and significant economic benefits.
- Economic growth in Australia is dependent upon a high and advancing level of education.
- Higher education should be available to all citizens according to their inclination and capacity.
- There should be a wider range of educational opportunities beyond secondary school and there should be extensive vocational and specialised training.

(Treyvaud & Davies, 1991, p. 6).

A major outcome of the Martin Report was the establishment of the binary system of higher education in Australia. That is, the universities were to be maintained and encouraged to expand. Secondly, Colleges of Advanced Education (CAEs) were to be established to provide more vocationally oriented education. Since the recommendations of the Martin Report were implemented 13 years ago, the Commonwealth Government has assumed full financial responsibility for higher education in Australia. By 1987, there were 19 universities and 46 CAEs across Australia catering for just under 400,000 students. Initially, the intention was that the CAEs would not offer awards higher than a diploma level, however, the increasing pressure on the CAE sector in the areas of quality and depth of courses, and staff experience and qualifications saw them offering bachelor degrees by the early 1970s (Game, 1994). At the same time, universities were being encouraged to offer a greater diversity of programs and to be more receptive to the needs of industry and commerce to increase the vocational relevance of courses. The distinction between the universities and the CAEs was becoming increasingly blurred.



The economic and social responsibilities associated with the national system of higher education came under scrutiny again in the late 1980s when the Commonwealth Government launched a policy discussion paper on higher education in Australia (Dawkins, 1987). The resulting review considered the expectations and demands people and business communities had of higher education institutions and whether institutions had responded to those demands and expectations. Institutions were also asked to examine their social, economic and cultural obligations and how effective they had been in achieving their goals. This enquiry culminated in the release of a White Paper (Dawkins, 1988) which outlined the dismantling of the binary system and the establishment of a new unified national system. This policy change saw the amalgamation of many CAEs with universities or the combination of existing CAEs to form new universities.

One of the significant features of the White Paper (Dawkins, 1988) was the need to improve the educational opportunities available to those Australians who had in the past not participated in the system. People in these educationally disadvantaged groups included those from lower socioeconomic backgrounds, those living in rural and isolated communities, and Aboriginal people. The consolidation and upgrading of distance education and the increased opportunities for mature age entry to higher education were two of the direct measures stipulated to assist in improving opportunities in higher education (Dawkins, 1987).

### **Distance Education**

Since the early 1970s, the CAEs have developed external studies programs to help meet the growing demand for places in higher education. Following the release of the White Paper (Dawkins, 1988), the development and delivery of external courses was centralised to eight major Distance Education Centres (DECs) located in the mainland states. External students became more selective in their choice of course and institution, paying more attention to the instructional design of learning materials

and the quality of student support services (Game, 1994). Although the DEC system has now been disbanded in favour of a National Distance Education Centre (NDEC) system, universities offering distance education programs displayed an increasing awareness of the need for study materials to reflect the principles of student learning. Today, study guides frequently include integrated learning activities and strategies to assist students to better understand the topic being considered (Herrington, Fox, Gillard & Rainford, 1991). Multimedia materials are also often used to supplement print based learning packages.

In recent years government goals for education have addressed the issues of access and equity in higher education (Dawkins, 1988). These goals are associated with issues such as lifelong learning, social equity, workplace education and links with industry. The development of distance education is recognised as one means of achieving these goals. Enrolment in distance education courses in Australia has steadily increased in the last few years and has expanded to include a wider clientele. This growth and development has seen distance education and open learning emerge as major vehicles for teaching and learning in higher education today.

The external studies program at the university in the current study began in the mid 1970s and was established primarily to enable teachers to upgrade their qualifications. In its first year there were just 30 students, most of whom were two year trained teachers, who undertook studies in various curriculum and education specialist areas including Aboriginal education. There are now more than 30 different courses, including programs from all five faculties, offered externally at this university. Although external study is the only option for many geographically isolated students or for those whose employment or personal circumstances prevent them from coming on-campus, some students are now choosing to study externally, whereas in the past they would have studied on-campus. Where possible, learning packages are being designed to

provide students with more flexibility of access and where the lecturer is more a facilitator of learning than a provider of content material.

The university, from which the study sample has been selected, is the seventh largest university provider of distance education in Australia, enrolling approximately 1800 (52% of total university enrolments) Western Australian distance education students, together with about 1000 students from other parts of Australia and 95 international students. Approximately one third of external students at the university live in the Perth metropolitan area, one third in country Western Australia and one third in other parts of Australia. In 1994, the university had 2819 (16.3% of total university enrolments) students studying externally and 618 (3.5% of total university enrolments) students studying mixed mode.

### **Attrition in Distance Education**

Spady (1970), Tinto (1975) and Kember (1989) have recognised student attrition as a multivariate problem, involving complex interactions between the student and the educational institution throughout the length of their course. Attrition is considered a longitudinal process in which student background characteristics (e.g., age, place of residence, sex) influence the way in which the student interacts with the institution, which in turn affects their educational and attitudinal outcomes and may eventually result in a decision to withdraw from the unit or the course. Kember (1995) is the most prolific writer on attrition in distance education in recent times. Based on his own research and his summary of the literature, Kember (1995) indicates that variables associated with student entry characteristics, their "social integration", "academic integration", "external attribution" and "academic incompatibility" are most likely to influence decisions they make in relation to the progress of their studies.

Parallel to the general growth and development of distance education over the last 25 years, there has evolved a conceptual framework to explain the drop-out phenomenon in this area of higher education. The problem of drop-out in distance

education is widely recognised and has been subject to considerable investigation (Garrison, 1987; Cookson, 1989; Kember, 1989; Zajkowski, 1992). Initially, this interest in retention rates was closely associated with the need to show that distance education was an effective alternative to conventional classroom teaching in higher education. However, in more recent times, research into attrition from distance education has been associated with the desire to understand the external student with the intention of developing and producing better quality student learning packages and administrative support (Garrison, 1987; Bernard & Amundsen, 1989). An improved knowledge of the factors associated with drop-out from distance education is not only desirable but imperative if this mode of study is to continue to develop as a major vehicle for teaching and learning in higher education.

Some of the reasons students withdraw are related to their work (e.g., assuming additional responsibility at work), personal (e.g., birth of a child, marriage breakdown), related to the administration of the course by the university (e.g., late receipt of unit materials), or other administrative factors (e.g., delayed arrival of text book). Some students may be unwilling to identify the real reason behind their decision to withdraw. For some students, there are multiple reasons for them withdrawing from their courses (Price, Harte & Cole, 1991); therefore, it is postulated that both demographic and administrative factors can be expected to contribute to attrition and persistence for students studying externally.

### **Attrition and the University in the Current Study**

The drop-out rates for distance education courses are usually higher than those for comparable on-campus courses (Kember, 1995). An examination of the attrition rates for the university in the current study confirms this finding. Table 1.1 indicates that the attrition rates over the last four years for external students were more than double those for internal students. Given this information, and the financial and

educational implications associated with student attrition, it is not surprising that student progress in distance education has been a major focus for research.

**Table 1.1**  
**Turnstile to reference date enrolment (EFTS) attrition**

		External	Internal
1992	March 3 Turnstile	1662	12889
	March 31 Reference	1374	11985
	Attrition Percent	17.3	7.0
1993	March 3 Turnstile	1768	12515
	March 31 Reference	1361	11832
	Attrition Percent	23.0	5.5
1994	February 28 Turnstile	1735	12545
	March 31 Reference	1449	11535
	Attrition Percent	16.5	8.1
1995	February 27 Turnstile	1889	13074
	March 31 Reference	1544	12015
	Attrition Percent	18.2	8.1

(Data made available by the Research and Statistics Division of ECU)

Most student withdrawals occur in the early part of the semester and before the last day for withdrawal without financial penalty, that is, before the Higher Education Contribution Scheme (HECS) assessment dates of 31 March (semester 1) and 31 August (semester 2). Senior staff in the Department of External Studies at the university see the drop-out rate as an area of concern and have suggested that research is required into the reasons for external student attrition at the university.

In July, 1993, the university concerned in this study established a Working Party on Distance Education, Programme Delivery and External Studies. This Working Party developed a discussion paper which identified the following five key issues facing the university:

- **Students.** In particular, two aspects were highlighted. The first aspect was the student profile in terms of learning, social equity, workplace education and links with industry. This included the identification of the clientele, including such details as drop-out rates and age distribution of

students. The second aspect was to investigate student skills in such areas as research, computer literacy and information processing skills.

- **Flexible delivery modes.** One of the major targets of the university in the next three years was to achieve rapid growth in the number of on-campus students undertaking external units (i.e., mixed mode). This will necessitate flexibility of access, if students are to maximise their choice of time, place and mode of study.
- **Staffing.** Areas nominated as requiring further investigation included the profile of staff, professional development, implications of part-time or sessional staffing, workload allocation and formula, development of units suitable for flexible delivery and staff attitudes.
- **Research.** As a large off-campus education provider, the recognition of a research base which underpins the development of all facets of external study at this university was long over due.
- **Long-term goals.** These related to the promotion of off-campus flexible delivery modes, the status of off-campus education (in particular to identify ways of raising the status of external study), intellectual property and the need for a five year plan.

The current study further examines some of the issues raised in the Working Party discussion paper. From the extensive range of courses offered externally by the university, the Fourth Year of the Bachelor of Education was selected as a suitable award to draw the study sample from. This course has been offered externally by the university for nearly 20 years and has one of the largest external enrolments. Most students study part-time and take between two and four years to complete the program. As students enrolled in the Fourth Year of the Bachelor of Education course already have an initial teaching qualification, it is not surprising that many of them are currently employed as teachers or working in an educational environment. They are mostly mature aged students and experience many of the difficulties associated with integrating the demands of their studies with those of their family, friends and work colleagues.

## **NEED FOR THE STUDY**

Student attrition in higher education is a recognised major problem that has both economic and educational implications. These costs include those associated with

forwarding application information, production of course brochures and unit materials, and staff time in processing enrolments. Not only is there the financial cost of enrolling a student who then withdraws, but there is a general perception that “the attrition rate is an indication of the quality of education that institution offers” (Price et al., 1991, p. 4). Although it is expected that many of the reasons associated with attrition are beyond the control of the university, an understanding of how these variables affect student progress may enable the university staff to be more supportive of students with their studies. Modification of university procedures, based on a better understanding of the reasons for attrition, by both administrators and teaching staff may reduce the rate of attrition for external students.

## **STATEMENT OF THE PROBLEM**

The current study addresses one of the specific points raised by the Working Party on Distance Education, Programme Delivery and External Studies, namely, the reasons for attrition of external students at the university. The Fourth Year of the Bachelor of Education is one of the largest external courses offered by the university, both in terms of the number of enrolled students and the number of subjects available. The Fourth Year of the Bachelor of Education award was also one of the foundation external courses offered by the institution and the geographical location of students in this award reflects the general dispersion of external students at the university. For these reasons, it is from this award that the sample will be drawn for the study.

The following two specific questions will be addressed:

1. To what extent do any or all of the following variables relate to attrition and persistence of external students enrolled in the Fourth Year of the Bachelor of Education course at the university?
  - age
  - gender
  - number of years of teaching experience

- number of years since completing pre-service training
- stage in the course (completed one or two of eight units)
- current occupation (teacher, principal, home duties, student)
- geographic location (metropolitan, country and interstate)
- method of communication with tutor, other students and external studies (electronic mail, post, phone, facsimile)
- administrative issues (quality of unit materials, late enrolment or receipt of unit materials, out of print texts, delays in assignment return)
- personal circumstances (e.g., separation from spouse)
- work related issues (e.g., change of school)
- perceived benefit of completing the course
- relevance of unit content to perceived career needs and interests

2. To what extent are any of the following sub-scales and scales developed from the DESP inventory (Kember et al., 1995) associated with attrition and persistence of external students enrolled in the Fourth Year of the Bachelor of Education course at the university.

#### Social Integration Scale

- Enrolment encouragement
- Study encouragement
- Family support

#### External Attribution Scale

- Insufficient time
- Events hinder study
- Distractions
- Potential drop-out

#### Academic Integration Scale

- Positive impression of the course
- Positive telephone counselling
- Reading habit
- Deep approach
- Intrinsic motivation

#### Academic Incompatibility Scale

- Negative impression of the course
- Extrinsic motivation



- Surface approach
- Potential drop-out

## **SIGNIFICANCE OF THE STUDY**

In response to Commonwealth Government initiatives to improve the quality of teaching and learning and the efficient use of resources in higher education, the university in the study is reviewing its policies and procedures relating to these issues (Quality Assurance Review, 1994). It is envisaged that changes based on the outcome of this review will assist in improving the effectiveness and efficiency of the services offered to external students, and by doing so, reduce the attrition rate and provide educational benefits to those students continuing in their studies. These results may occur through a review of application and pre-enrolment counselling services provided to prospective students, or a refinement of administrative procedures for new and continuing students. Changes may also be made to procedures involving the design and development of quality learning materials and the establishment of more effective tutor-student communication. Furthermore, it is envisaged that a better understanding of the variables identified in the current study as being related to attrition and persistence will enable improvements to be made to the quality of education offered by the institution.

The university may consider broadening the scope of the study to include other courses offered externally, if the findings of this study prove to be useful in reducing attrition rates for students enrolled externally in the Fourth Year of the Bachelor of Education award. A greater understanding of the attrition process is essential if distance education is to be recognised as a means of achieving goals associated with lifelong learning, social equity and access.

## **DELIMITATION OF STUDY**

The findings of the current study will be confined to those students enrolled externally in the Fourth Year of the Bachelor of Education course during second semester 1995 at this university, who were resident in Australia and who have agreed to participate in this study by returning a consent form and the two self-administered questionnaires.

## **DEFINITIONS**

### **Distance Education**

Distance education is defined as “formal instruction in which a majority of the teaching function occurs while the educator and learner are at a distance from one another” (Verduin & Clark, 1991, p. 13). Students undertaking distance education courses are often referred to as external students, or students studying in the external mode.

### **Enrolled Students**

Enrolled students are defined as those whose unit nominations have been accepted by the university. Enrolled students are also referred to as continuing or persisting in their studies.

### **Withdrawn Students**

Withdrawn students are defined as those who had been enrolled at the commencement of week three of semester but who subsequently advise the university prior to the last day for withdrawal without academic penalty (end week 10) that they do not wish to proceed with their studies in that unit. The terms withdrawal, attrition and drop-out are used interchangeably in this study.

## **Mixed Mode Student**

A mixed mode student is defined as one who is enrolled in one or more units externally while at the same time is enrolled on-campus in one or more units.

## **OUTLINE OF THE STUDY**

Chapter two provides a detailed review of the literature pertaining to attrition in higher education and distance education. The following chapter is a description of the methods, materials and analysis used in the current study. The remaining chapters present the results of the study, discuss these in the context of the literature review, provide recommendations for future research and make suggestions on how existing university procedures might be amended to reduce the rate of attrition for external students enrolled in the Fourth Year of the Bachelor of Education course.

## **CHAPTER 2. LITERATURE REVIEW**

### **INTRODUCTION**

The literature review reports on important issues related to attrition in higher education. In particular, attention is given to the variables associated with withdrawal from distance education programs. The meaning of attrition and the significance of this concept are discussed in the early part of the chapter. This is followed by a chronological account of the major theoretical issues and developments associated with attrition in the last three decades. Attention is then given to drop-out in distance education where a number of theoretical frameworks have been devised to accommodate the distinguishing features of external study. A recent comprehensive model of student progress in distance education is then described, highlighting the complexity and multivariate nature of this phenomenon.

### **The Significance of Attrition**

Student attrition in higher education is a recognised major problem that has both economic and educational implications (Kember, 1995). The financial costs include those associated with forwarding application information, production of course brochures and unit materials, and staff time in processing enrolments. In addition to the financial cost of enrolling a student who then withdraws, there is a general perception that “the attrition rate is an indication of the quality of education that institution offers, whether that be in the form of formal instruction or the extent to which it contributes to the satisfaction of certain individual life goals” (Price, Harte & Cole, 1992, p. 4). Kember (1995, p. 22) suggests that “attrition rates are a performance indicator used to assess the success of educational institutions”.

Research into student progress has been concerned with the ways in which student drop-out rates can be reduced. This has resulted in the development of policy guidelines and the modification of university procedures by both administrators and teaching staff designed to improve attrition. Although it is expected that many of the reasons associated with attrition are beyond the control of the university, an understanding of how these variables affect student progress may enable the university to be more supportive in assisting students to persist in their studies.

### **Defining Attrition**

The term attrition is a broad concept that has been used extensively in the literature but is not always adequately defined in research studies (Tinto, 1975; Woodley & Parlett, 1983; Price et al., 1992). Drop-out, withdrawal rate, failure rate, wastage rate and attrition are all terms that are used interchangeably in this paper and have been used by others to describe the percentage of students that leave the university before completing their course (Yuen, Siaw, Hung & Hatchard, 1994). The distinction is not always clear between students who permanently drop-out from the course and those who withdraw for a shorter period of time, such as a semester; nor between those who drop-out because of academic failure and those who choose to withdraw (Kember, 1995). Students may therefore fail to complete and pass a course by voluntarily withdrawing, or informally withdrawing and fail by remaining enrolled but not completing any assessment requirements, or by completing all the assessments but not meeting the required standard and thus being considered an academic failure.

There are also different ways of presenting drop-out statistics, depending on the purpose of the study (Roberts, 1984). For example, drop-out statistics may be shown as a percentage of unit withdrawals, a percentage of course withdrawals or a percentage of institution withdrawals. Drop-out statistics may also be presented as a percentage of students enrolled in each faculty. As a result of this variation in means of

reporting attrition statistics caution should be taken in interpreting research findings relating to drop-out from higher education.

In the case of distance education particular attention to definition of terms is warranted as students may be more inclined to enrol informally, specifically with the intention of obtaining a package of study materials and never intending to complete the formal assessment component of the unit. These students may be more accurately described as “non-starters” (Kember, 1995, p. 25) and along with early withdrawals may have a significant impact on reported drop-out rates. Many institutions allow a settling down period before calculating initial enrolments in which students may change their enrolment, and to allow for late enrolments and course transfers.

Price et al., (1992, p. 5) divide attrition in higher education into three main categories:

1. *Internal attrition.* This refers to students who transfer to different major programs of study within the institution. These students are not lost to the institution and, it could be argued, do not represent a total loss of institutional resources.
2. *Institutional attrition.* This refers to students who leave the original institution and enrol at another institution to continue their studies. These students are not lost to the system and, it could be argued, do not represent a total loss of educational resources.
3. *Systemic attrition.* This refers to students who withdraw from the institution and do not enrol at any other higher education institution.

With the increasing accessibility and availability of university courses, many students, particularly mature age part-time students, prefer to nominate specific subjects or units to study without ever intending to complete all the subjects in that course (Baath, 1982). They may be concerned with updating their skills as a result of technological change and development, or just furthering their knowledge in a field. However, university procedures usually require students to enrol in a course first and then by individual subjects. In some studies these students may be recorded as drop-outs, when in actual fact, they have satisfied their own academic goals.

## **Magnitude of Drop-out**

Estimates of non-completion in distance education range from 30% to 70% (Wilkinson & Sherman, 1989). As previously mentioned however, given the variability of defining attrition, caution needs to be exercised when interpreting statistics reporting drop-out rates. These data may be of limited value, particularly for comparative purposes with other institutions due to this problem of definition (Kember, 1995). More meaningful information may be obtained at the institutional level where statistics from one year to the next can be compared and trends extrapolated. Institutions may also be reluctant to publish their drop-out statistics for fear of negative repercussions, particularly in relation to the quality of education offered by that institution (Price et al., 1992).

For many students the most critical part of the course in relation to decisions concerning drop-out is the first few weeks of semester. This period is particularly important for the first unit or first few units of the course. When non-starters are included in the figures Baath (1982) reports that drop-out rates around 50% or more are not unusual. Where a settling down period of two to three weeks into the semester is allowed before turnstile figures are calculated, drop-out rates are generally much lower.

The drop-out rates for distance education courses are usually higher than those for comparable courses for full-time students (Kember, 1995). An examination of the attrition rates for a local tertiary institution confirms this finding. In this instance the attrition rates over the last three years for external students were more than double those for internal students. Given this statistical information and the financial and educational implications associated with student attrition it is not surprising that this area has been a major focus for research (Garrison, 1987).

## **STUDENT PROGRESS IN HIGHER EDUCATION**

### **Background**

During the 1960s a number of reviews of the reasons for drop-out from higher education were published. Spady (1970) acknowledged that these studies lacked both theoretical and empirical coherence. Most of these studies did not appear to go beyond highlighting some broad conclusions linking attrition to ability level and family background. The early research into student persistence concentrated on attempting to identify entry characteristics that correlated with drop-out (Kember, 1995).

Researchers had limited success using enrolment data (e.g., age, sex, educational background) as predictors of student continuance. Neither the institution's policies and procedures nor changes in students' characteristics as a result of their educational experiences as the course progressed were taken into account in these single variable studies. The need developed to investigate further the relationship between the academic and social environment of the institution and the attributes of students. The complexity of the attrition process was widely acknowledged (Kember, 1989) and a number of theoretical models were developed to identify the most important factors relating to attrition and persistence.

### **The Developing Concern for Attrition from Higher Education**

Spady (1970), Tinto (1975) and Pascarella (1980) recognised student attrition as a multivariate problem, involving complex interactions between the students and the educational institution throughout the length of their course. Attrition is considered a longitudinal process in which student background characteristics (e.g., age, place of residence, sex) influence the way in which the students interact with the institution, which in turn affects their educational and attitudinal outcomes, which eventually result in a decision relating to drop-out.

Spady (1970) and Tinto (1975) related student drop-out to Durkheim's (1961) model of suicide. Durkheim postulated that suicide was more likely to occur where



individuals lacked a sense of belonging or felt isolated in their community. He noted that this lack of integration into the community could either be social or intellectual in nature. Durkheim argued that if either form of integration were lacking, there was some press towards suicide, as individuals would become either social isolates or intellectual deviants. Pascarella's (1980) reasons for attrition developed from the work by Spady (1970) and Tinto (1975) but placed more emphasis on the informal contacts between the student and the faculty. Non-traditional (i.e., not living in college residential accommodation) student attrition was the focus for Bean and Metzner (1985) when they considered the issues associated with the increase in enrolments of older, part-time and commuter students (i.e., students who travelled to class from home). Although described as non-traditional, these students were still receiving their instruction in a face-to-face situation. Distance education students are also considered non-traditional, however, the main form of instruction for distance education students is their package of study materials and not a face-to-face situation in a classroom.

Tinto's (1975) model of drop-out from higher education has been particularly influential in not only the development of subsequent models of attrition from traditional forms of higher education, but in the development of a model of persistence in relation to distance education (Kember, 1995). Student withdrawal in distance education is discussed in detail later in this paper. Four models describing attrition from higher education programs (Spady, 1970; Tinto, 1975; Pascarella, 1980; Bean & Metzner, 1985) are discussed in the following section.

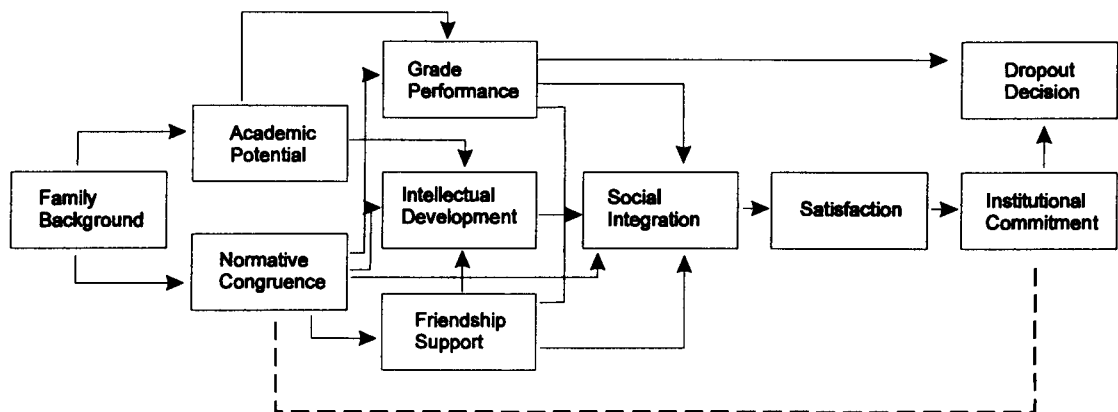
### **Spady's Model of Drop-out from Higher Education**

In response to the need to identify the most important factors relating to attrition and persistence, Spady (1970) developed a model of student drop-out from higher education based on Durkheim's model of suicide. Durkheim (1961) proposed that individuals were more likely to commit suicide if their integration into society was insufficient. In his model, Spady (1970) equated suicide to drop-out and society to the

learning institution (Figure 2.1). He further divided integration into academic and social components, and the rewards to be had by the student from each. By academic integration he referred to both the intrinsic rewards of intellectual development and self-fulfilment, and the extrinsic rewards of satisfactory grades. Within the social system he recognised the need for the establishment of close relationships with other students and staff, and the attainment of satisfactory normative congruence, where the students' attitudes, interests and personality dispositions were basically compatible with the attributes and influences of the environment. Where the patterns of interaction between students with other students, or between students and faculty staff were inadequate, then Spady proposed that the drop-out rate was likely to be higher.

An examination of Spady's (1970) model indicates there are a number of variables such as family background, academic potential, normative congruence, grade performance, intellectual development and friendship support that influence social integration. Furthermore, the model shows two intervening variables affecting student drop-out; student satisfaction with their educational experience (i.e., was their academic performance satisfactory?) and their commitment to the institution. One of the significant features of Spady's (1970) model is the broad ranging influence of all that is implied by the normative congruence variable. This one component represented not only the student goals, orientations, interests and personality dispositions discussed earlier, but the consequences of the interaction between these attributes and various sub-systems of the college environment. The normative congruence variable is shown in this model to have a direct influence on the students' grades, intellectual development, friendship supports and social integration, and an indirect influence on their satisfaction, institutional commitment and decisions to drop-out. The broken line (Figure 2.1) linking institutional commitment and normative congruence provides for the cyclical nature of the decision to drop-out and the flexibility required in

developing a model of drop-out from higher education that takes into account the continual changes in student attitudes, interests and goals.

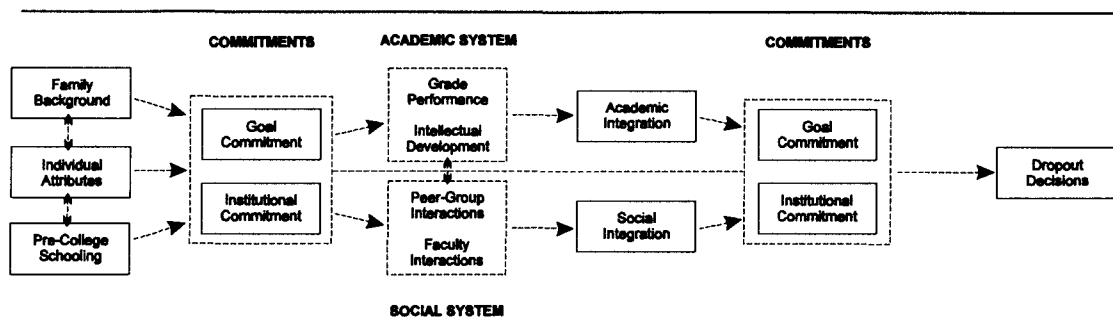


**Figure 2.1**  
**Spady's explanatory sociological model of the drop-out process (Spady, 1970, p. 79)**

Spady (1970) acknowledged that his model needed to take into account the multitude of variables associated with educational institutions and students. Subsequent models developed to explain drop-out from higher education on-campus and distance education also acknowledged the complexity of the attrition process and confirmed the need to understand this phenomenon better (Kember, Murphy, Siaw & Yuen, 1991).

### **Tinto's Model of Drop-out from Higher Education**

In developing a theoretical model of drop-out from higher education Tinto (1975) also built on Durkheim's theory of suicide, however, unlike Spady (1970), this model is more predictive than descriptive in it's theory of drop-out behaviour. Tinto's (1975, p. 91) model (Figure 2.2) is also an institutional rather than a systems model and "seeks to explain drop-out from institutions of higher education, not one that seeks to explain drop-out in the system of higher educational institutions".



**Figure 2.2**  
**Tinto's conceptual schema for drop-out from college (Tinto, 1975, p. 95)**

Tinto (1975) points out that much of the literature on drop-out from higher education has failed to define what is actually meant by drop-out. Some research has failed to distinguish between drop-out as a consequence of unsatisfactory academic performance and drop-out as a consequence of voluntary withdrawal. There has also been difficulty in identifying those students who return to their studies at a later date and those who continue their course at another institution. This lack of clarity has resulted in both misleading and contradictory research reports.

Tinto's (1975) model revolves around the interaction that occurs between the student and the educational institution. Tinto (1975) proposed that the quality and the quantity of contacts between students and staff, and between students with other students had a positive correlation with student persistence. A student whose social interactions with others at the institution are insufficient and whose value patterns are dissimilar to those of the institution is more likely to withdraw. By social integration Tinto was referring to the friendship and support resulting from both the informal peer group associations and the more semi-structured extracurricular activities and interactions with teaching staff and administrators.

The longitudinal model of drop-out from higher education developed by Tinto (1975) also took into account the varying background characteristics (e.g., place of residence, social status) and individual attributes of students (e.g., age, sex, race).

Tinto (1975) found that students from higher status families were less likely to withdraw than students from lower socioeconomic status families in America. Furthermore, “college persisters tend to come from families whose parents tend to enjoy more open, democratic, supportive, and less conflicting relationships than their children” (Tinto, 1975, p. 100). Parental expectations appear to have as much influence on the student with relation to drop-out as the student’s self-expectations and goal commitment.

Tinto, like Spady (1970), also acknowledged the need to distinguish between the academic and social systems of the educational institution. Some students may achieve satisfactory integration into the social system of the institution while at the same time battle to achieve satisfactory academic integration. This may result in academic failure. The converse is also possible where the students' academic results are satisfactory, however, they have not integrated adequately into the social system of the institution. This may result in voluntary withdrawal. The students' academic results are considered a reflection of both the ability of the students and the preferred style of academic behaviour of that institution (Tinto, 1975). Tinto’s model also considers the students' intellectual development, a more intrinsic factor than grade performance. Intellectual development occurs as a result of the students' educational experiences during the course of their studies and is reflected in their academic and personal development. Less tangible than grade performance, intellectual development was seen as the individual's evaluation of the academic system (Tinto, 1975).

Tinto's (1975) model also considered the students' educational expectations and goal commitment or motivation for achievement. Information concerning both the level of expectations (e.g., length of course) and the intensity of the expectations (e.g., how committed the students are to completing the course) is applicable to this component of the model. Furthermore, information concerning the students' desire to attend one specific institution (or type of institution) is also related to the rate of withdrawal from higher education.

In brief, Tinto (1975) has proposed in his model of drop-out from higher education that students with varying family backgrounds, individual attributes and pre-college experiences enrol at specific institutions. Together with the students' educational expectations and institutional commitments, these factors interact to have both a direct and an indirect impact on the students' progress in the course. The likelihood of continuance in their studies is directly related to the ability of the students to integrate into the academic and social systems of the institution. New levels of commitment develop as a result of these experiences during the course of their studies which, in turn, result in the students making decisions related to drop-out. Either low goal commitment or low institution commitment may result in the students deciding to withdraw from their studies.

Tinto's (1975) model sought to focus attention on how individual institutions could by changing their policy reduce the attrition rate. His model sought to distinguish between voluntary withdrawal and drop-out as result of academic failure. "Although it took account of the attributes, skills, abilities, commitments, and value orientations of entering students, the model did not focus directly on those characteristics other than as they interfaced with the collective attributes and orientations of the academic and social systems of the institution in which individuals experience their educational careers" (Tinto, 1982, p. 688). For example, little recognition was given to the financial pressures some students face, or the influence of friends outside the educational environment and how these factors may affect decisions relating to drop-out.

Yuen et al. (1994) suggested that in the last 20 years much of the research into drop-out from higher education has been guided by Tinto's (1975) model. However, when this model was developed Tinto was mainly concerned with recent school leavers who were full-time students in a face-to-face teaching situation. He later acknowledged (Tinto, 1982) that his model needed to be modified for different

situations such as distance education, where students were largely mature age, part-time and off-campus.

### **Research Studies Resulting from these Early Models**

By the late 1970s a number of studies designed to investigate further the validity of Tinto's (1975) longitudinal model of college withdrawal were reported in the literature (Pascarella and Terenzini, 1979; Pascarella and Terenzini, 1980; Pascarella and Chapman, 1983). Along with his colleagues, Pascarella conducted a number of studies based on Tinto's primary assumption of persistence or drop-out behaviour being a function of the quality of the student's interactions with the academic and social systems of the college (Tinto, 1975). Pascarella, however, also acknowledged the complexity of both Spady's (1970) and Tinto's (1975) models and he incorporated the influence of the students' background characteristics into his studies.

Pascarella & Terenzini (1979) began a study in 1976 at a large, independent, residential university in New York. They investigated the effects of student characteristics and measures of social and academic integration on voluntary freshman withdrawals. The findings of this study confirmed the complexity of social influences on student persistence and withdrawal decisions as highlighted by Spady (1970) and Tinto (1975). Thirteen measures of social and academic integration were shown to have contributed to the explanation of voluntary withdrawal by college freshmen. The variables in the social integration category were involvement in extracurricular activities, peer group relations and informal relations with faculty, and frequency of informal contacts with faculty to discuss campus issues, to socialise informally and to resolve a personal problem. The variables in the academic integration category were freshmen year grade point average, the academic and intellectual development and faculty concern for teaching and student development, and informal contacts with faculty to obtain advice and information about academic programs, to discuss intellectual matters and to discuss career concerns. In addition, items

measuring institutional and goal commitment were treated separately and found to represent measures of both academic and social integration.

The second main outcome of the study by Pascarella and Terenzini (1979) suggested that the experiences these freshmen had in their first year of study may be more important in terms of persistence than their particular background characteristics and commitments that they brought with them to the college. The influence of the frequency and quality of student-faculty relationships showed the most consistent pattern of interaction effects. Such relationships were most important in positively influencing the persistence of freshmen with entry characteristics and levels of academic and social integration that were predictive of withdrawal. The results of the study indicated that positive student-faculty relationships may compensate for less adequate student characteristics (e.g., low goal commitment, absence of parental role models) in explaining course persistence. The converse may also be applicable. That is, students commencing their studies with a strong graduation commitment, appropriate parental support and satisfactory social and academic integration may be able to overcome inadequate student-faculty relationships and therefore lessen the impact this variable may have on their decisions relating to course persistence.

In a study in which student entry characteristics were controlled for and using data from incoming freshmen at Syracuse University, Pascarella and Terenzini (1980) examined the predictive validity of their measures of social and academic integration as discriminators of first year student persistence and voluntary withdrawal when student entering characteristics were controlled for. Although Tinto's (1975) model may explain attrition during any stage of the course, due to withdrawal being heaviest in the first year of study, it was felt that using freshmen would provide a reasonable assessment of the predictive validity of the Tinto model (Pascarella & Terenzini, 1980).

The results were generally supportive of the predictive validity of Tinto's (1975) model and in particular highlighted the significance of student-faculty relationships in



discriminating between those students who persist and those who voluntarily withdraw from their studies. The results also suggested that the quality and impact of student-faculty informal contacts may be as important to the institutional integration of students and thereby, their likelihood of persisting in college, as the frequency with which such interactions occurred. Pascarella and Terenzini (1980) acknowledged the limitations associated with the sample being from a single institution and a single year, and recommended a replication of this study in other institutions and with other year groups to further substantiate the predictive validity of Tinto's model.

Pascarella and Chapman (1983) took up this challenge and reported a study involving three different groups of higher education students. The first group were predominantly residential students enrolled in a four year award, the second were predominantly commuter students also enrolled in a four year award, and the third group were students enrolled in a two year course who were predominantly commuter. The results again were generally supportive of the predictive validity of Tinto's (1975) model, however, the inadequate operational definitions of the model's variables were more noticeable in this multi-institutional sample (Pascarella & Chapman, 1983). That is, when students living at home and travelling to college were investigated some inadequacies in the components of Tinto's model became apparent. Greater difficulty was found in classifying the range of external influences and personal situations non-residential students faced according to the variables as defined in Tinto's model.

One of the interesting differences reported was that in the four year primarily residential colleges, social integration was a stronger influence on persistence than academic integration, institutional commitment was more influential than goal commitment, and the influence of the students' background characteristics was moderated by their college experience. Institutional commitment was a stronger influence on persistence than goal commitment in the four year primarily commuter colleges, but the reverse was found in the two year primarily commuter colleges.

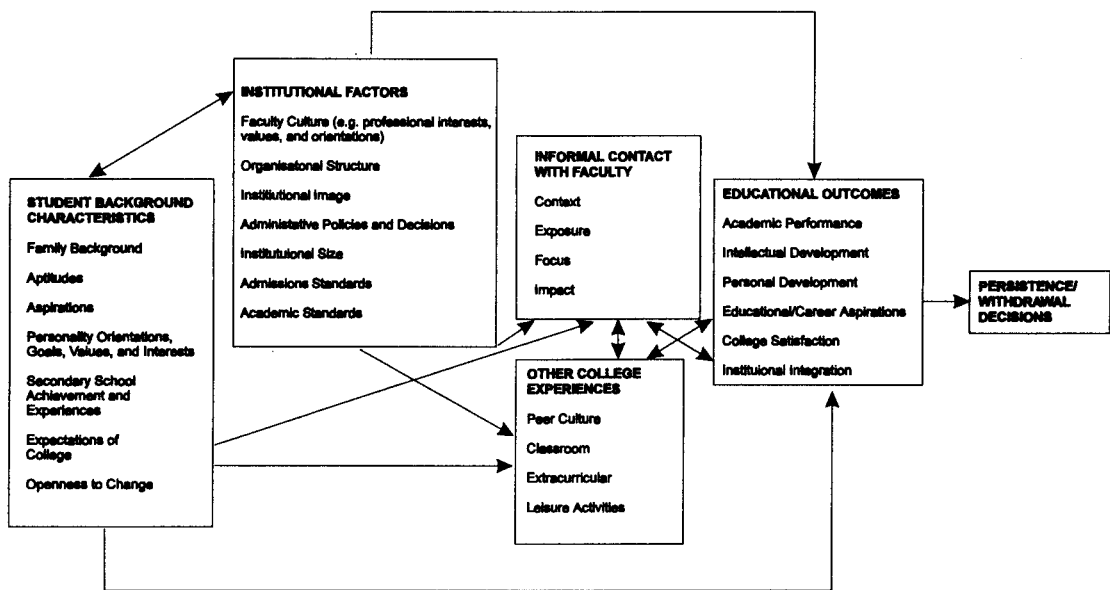
However, in both the two and four year primarily commuter colleges academic integration had a stronger effect on persistence than social integration. Student background variables were also more influential on persistence for the commuter students.

In summary, research undertaken by Pascarella and his colleagues in the late 1970s, indicated that the total frequency of student-faculty informal non-classroom contact and the frequency of interactions with faculty to discuss intellectual matters, were related to subsequent voluntary persistence and withdrawal decisions (Pascarella, 1980). Moreover, the quality of student-faculty interactions were found to be as important in affecting voluntary persistence and withdrawal decisions as the frequency with which such interactions occurred. The frequency and quality of informal interactions had a varied influence on voluntary persistence and withdrawal decisions for different students in different situations.

Subsequent to these studies and further to the models developed by Spady (1970) and Tinto (1975), Pascarella (1980) proposed a third longitudinal model concerning drop-out from higher education. This model was based on the previous two, but placed greater emphasis on the significance of student-faculty informal contacts.

### **Pascarella's Conceptual Model for Research on Student-faculty Informal Contact**

Although student-faculty informal contact was the main independent variable in only a few investigations, the growth in evidence that suggested student-faculty informal contact was associated with persistence prompted Pascarella (1980) to develop a larger conceptual model of college impact on students (Figure 2.3).



**Figure 2.3**  
**Pascarella's conceptual model for research on student-faculty informal contact**  
**(Pascarella, 1980, p. 569)**

As was the case in the models developed by Spady (1970) and Tinto (1975), Pascarella (1980) acknowledged that student background characteristics (e.g., family background, individual aptitudes, personalities etc.) combined to form a profile of individual differences which students bring to the institution. These background characteristics have both a direct and indirect effect on educational outcomes and resulting persistence and withdrawal decisions through their impact on institutional factors, informal contact with the faculty and other college experiences. Pascarella's (1980) model indicates that the student's progress is influenced by various institutional factors (e.g., faculty structure, administrative policies etc.) and this may result in students with particular background characteristics being attracted to different colleges.

Pascarella's (1980) model proposed that institutional factors influence both informal student-faculty contact and other college experiences. This model also shows the reciprocal influence of the informal student-faculty contact component with

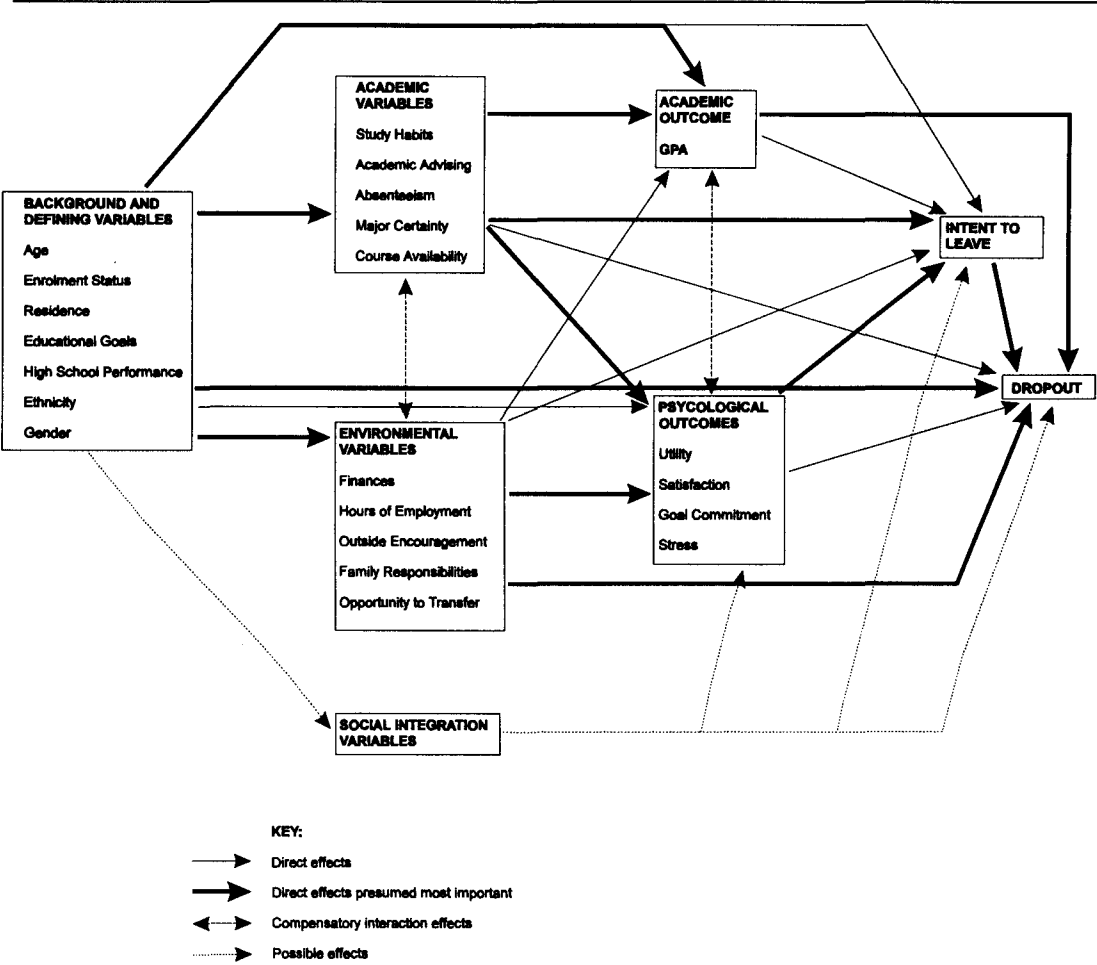
students' other college experiences. For example, peer group friendships that develop may have positive or negative influences on the students' attitudes towards their studies which also affect their subsequent behaviour with respect to informal contact with the faculty. Pascarella's model also indicates a reciprocal effect between the informal contact with faculty and other college experiences, and educational outcomes. Finally, educational outcomes (e.g., academic performance, intellectual development etc.) are shown to have a direct influence on decisions relating to persistence and withdrawal.

In summary, investigations indicated that when student characteristics are controlled for, "significant positive associations exist between extent and quality of student-faculty informal contact and students' educational aspirations, their attitudes towards college, their academic achievement, intellectual and personal development, and their institutional persistence" (Pascarella, 1980, p. 545). Although longitudinal in nature, the number of indirect and reciprocal influences shown in Pascarella's (1980) model concur with previous findings regarding the complexity of the attrition process (Kember, 1989). Whereas the models developed by Spady (1970) and Tinto (1975) were specifically concerned with explaining drop-out for residential students, Pascarella's (1980) model takes into account the influences on students in more non-traditional situations. A conceptual model of non-traditional undergraduate student attrition, specifically developed in response to the growth in the number of older, part-time, and commuter students is discussed next.

### **Bean and Metzner's Conceptual Model of Non-traditional Student Attrition**

Institutional, curricular, political, economic and social factors have contributed to the initially rapid and then steady growth in the number of mature age, part-time students enrolled in higher education since the 1940s (Bean & Metzner, 1985). With the decline in the blue-collar sector of Western country economies, more people have obtained higher educational qualifications as a means of enhancing or securing

employment opportunities. As society’s views of women’s capabilities have changed, more women have also been seeking higher educational qualifications. More recently, government goals for education at an international level have been associated with issues such as lifelong learning and social equity. Bean and Metzner (1985) responded to the need to explain the drop-out phenomenon amongst these less traditional students and developed a conceptual model of non-traditional student attrition (Figure 2.4).



**Figure 2.4**  
**A conceptual model of non-traditional student attrition**  
**(Bean & Metzner, 1985, p. 491)**

In defining non-traditional students, Bean and Metzner (1985) first considered the characteristics of traditional students and then focussed on the differences between the two categories. They defined traditional students as residing on-campus, 18-24 years old, and attending college full-time. Non-traditional students were considered to be those lacking in one or more of these characteristics. Place of residence, age and status of enrolment were therefore the distinguishing characteristics considered in a definition of non-traditional students.

The theoretical models of drop-out from higher education developed by Spady (1970), Tinto (1975) and Pascarella (1980) have all emphasised the importance of the student's social integration into the institution in relation to attrition. However, the evidence indicating that the student's degree of social integration is positively related to persistence appears to be restricted to investigations involving predominantly residential colleges (Bean & Metzner, 1985). These social integration variables received less prominence in this model of non-traditional student attrition.

Although still receiving instruction in a face-to-face teaching situation, Bean and Metzner (1985) acknowledged that non-traditional students experienced less interaction with other students and less interaction with faculty staff, and more interaction with others outside the institution. The influence of these external factors is catered for by the inclusion of the environmental variables in their model.

Bean and Metzner's (1985) model of non-traditional student attrition indicated that decisions relating to drop-out are based primarily on four sets of variables: background and defining variables (e.g., age, enrolment status, gender); academic variables (e.g., study habits, course availability); environmental variables (e.g., hours of employment, finances); and psychological outcomes (e.g., satisfaction, stress). These variables are shown to have both direct and indirect effects on student attrition. Students with poor academic performance were expected to drop-out at higher rates than students who performed well, and grade point average (GPA) was expected to be

based mainly on past (high school) academic performance (Bean & Metzner, 1985). High school grades were not expected to have a direct impact on any decisions the student made in relation to drop-out, but were expected to affect directly college grades, which in turn may have a direct effect on drop-out. Thus, high school grades may be correlated with drop-out rates.

Bean and Metzner (1985) acknowledged that this model was tentative and developed in response to the need to cater for the growing number of non-traditional students. While placing very little significance on the social integration variables in their model, it is important to remember they were referring to college social integration variables in this instance. The models proposed by Bean and Metzner (1985) and Tinto (1975) both argue that decisions relating to persistence are a result of a number of complex interactions over time and that student background characteristics affect how well the student adjusts to the institution. However, the model of non-traditional student attrition developed by Bean and Metzner (1985) emphasised the role external factors play in affecting attitudes and decisions (Cabrera, Castaneda, Nora & Hengstler, 1992). Bean and Metzner (1985), through their environmental variables such as family responsibilities, draw attention to the significant role that outside influences may have on the attrition process for non-traditional students. The effect of variables such as personal and work commitments are further investigated in the next section.

## **STUDENT PROGRESS IN DISTANCE EDUCATION**

### **Background**

Parallel to the general growth and development of distance education over the last 25 years there has evolved a conceptual framework to explain the drop-out phenomenon in this area of higher education. The problem of drop-out in distance education is widely recognised and has been subject to considerable investigation (Garrison, 1987; Cookson, 1989; Zajkowski, 1992). Initially, this interest in retention

rates was closely associated with the need to show that distance education was an effective alternative to conventional classroom teaching in higher education. However, in more recent times, research into drop-out from distance education has been associated with the desire to understand the external student with the intention of developing and producing better quality student packages and administrative support (Garrison, 1987; Bernard & Amundsen, 1989). An improved knowledge of the factors associated with drop-out from distance education is not only desirable but imperative if this mode of study is to continue to develop as a major vehicle for teaching and learning in higher education.

### **Defining Characteristics of Distance Education**

Distance education as we know it today has developed from the correspondence school system of the past. Traditionally, it has centred around some form of printed study material and written communication between the student and tutor, usually in the form of assignments. For some time, printed and written correspondence by mail was the only mode of delivery utilised, however, with recent technological advancements, study materials today may incorporate a variety of media including audio and video tapes, personal computer (PC) floppy disks and compact disks (CD's). Even with the increasing availability of multimedia, print still seems to be the medium most widely utilised for distance education packages (Kember, 1995).

The second aspect of earlier correspondence education was the written communication between the student and tutor. This has developed today into a comprehensive range of academic and administrative support services. These may include enrolment advice and counselling; telephone discussions with both student service personnel and tutors; and facsimile and electronic communications.

Keegan (cited in Kember, 1995, p. 9) in a discussion of distance education definitions lists the main elements of a definition as:



- the quasi-permanent separation of teacher and learner throughout the length of the learning process; this distinguishes it from conventional face-to-face education.
- the influence of an educational organisation both in the planning and preparation of learning materials and in the provision of student support services; this distinguishes it from private study and teach-yourself programs.
- the use of technical media; print, audio, video or computer, to unite teacher and learner and carry the content of the course.
- the provision of two-way communication so that the student may benefit from or even initiate dialogue; this distinguishes it from other uses of technology in education.
- the quasi-permanent absence of the learning group throughout the length of the learning process so that people are usually taught as individuals and not in groups, with the possibility of occasional meetings for both didactic and socialisation purposes.

Given the diversity of distance education courses currently available the extent to which these features are found in programmes varies considerably. However, there is general agreement that the most essential component of any definition of distance education is the first element, the separation of the teacher and the learner. Verduin and Clark (1991, p. 13) succinctly define distance education as “formal instruction in which a majority of the teaching function occurs while the educator and the learner are at a distance from one another”. The implication of these distinguishing features of distance education on student progress are discussed in detail in the model of drop-out from distance education developed by Kember (1989).

### **The Development of a Model of Drop-out from Distance Education**

There have only been a limited number of theoretical models of drop-out from distance education. In one of the early ones, Kennedy and Powell (1976) proposed a descriptive model which related drop-out to personal characteristics and life circumstances. They employed a micro-sociological approach to the drop-out of students enrolled in the British Open University. Student characteristics, which are slow to change, such as educational background, educational self-concept, motivation and personality were considered in conjunction with the student’s changing

circumstances relating to finance, health, occupation, relationship with family and peer group, and support from the distance education institution. Kennedy and Powell (1976) proposed a model of two axes, personal characteristics and life circumstances, each with strong and weak poles. They postulated that students weak on both axes were more likely to drop-out and those who approached the extremes were seen to be at-risk. Other than suggesting that students should be screened more effectively at the admission stage based on educational qualifications the model provided little insight into drop-out from higher education. This was mainly due to the descriptive nature of the model and the emphasis placed on entry requirements and changes in circumstances. "Indeed the model appears to make the depressing suggestion that the drop-out process is difficult to influence by the educational institution, because the characteristics of the student population can only be influenced by selection of students" (Kember, 1989, p. 280).

In an attempt by Roberts (1984) to better understand the reasons for student drop-out from higher education it became evident that distance education students were more likely to withdraw during the first semester or first year of their studies. Roberts discussed this finding in the light of theories of distance education developed by Peters (1971), Holmberg (1980) and Sewart (1981). Peters (cited in Roberts, 1984, p. 56) believed distance education was a natural development of the industrial era and looked to economic and industrial theory to explain approaches to distance education. Holmberg (cited in Roberts, 1984, p. 58) and Sewart (1981) on the other hand took a more humanistic approach and emphasised the importance of both quality learning materials and an effective student support service. Given that "distance education institutions need large enrolments but low attrition rates if they are to be cost effective", Roberts (1984, p. 63) proposed that "somewhere along the line there has to be a balance between the cost-saving industrialisation concepts of Peters and the cost-raising approaches of Holmberg's and Sewart's student support systems". He put

forward a number of suggestions for reducing early student drop-out rates (e.g., high quality unit materials, effective pre-enrolment counselling) but does not claim to present a comprehensive model.

While appreciating the relevancy of the theoretical models developed by Spady (1970) and Tinto (1975) to explain the drop-out phenomenon, Thompson (1984) recognised the inadequacy of these early models to explain drop-out in distance education. Acknowledging that some distance education programs have high rates of withdrawal, Thompson (1984) proposed an explanatory construct for drop-out based on the cognitive style of field-dependence. Pascal (cited in Thompson, 1984, p. 288) reported that “students preferring independent study exhibited a greater need for autonomy, and flexibility, and a higher tolerance for ambiguity”. Thompson (1984) went on to state that field-independent people are more guided by their own needs and values than field-dependent people who tended to rely on others for guidance and direction. As such, field-independent people were found to be more suited to distance education. Thompson (1984) further proposed that field-dependent learners studying externally may benefit from increased opportunities to interact with their tutors or other students. For example, Thompson suggested that field-dependent learners may benefit from tutor initiated telephone calls following the return of an assignment.

Based on the assumption that some people are better suited than others to studying externally, Thompson and Knox (1987) conducted a study designed to determine whether field-dependent learners were less suited to distance education programs than field-independent learners. They also investigated whether field-dependent students were more likely to drop-out of their external course than field-independent students, and whether field-dependent students evaluated their distance education experience less positively than the field-independent students.

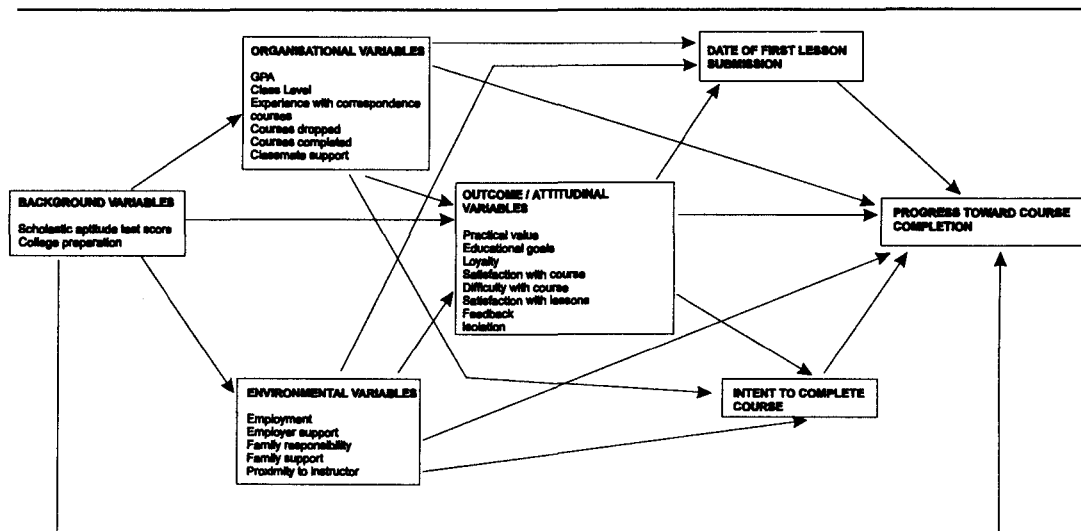
The results confirmed Thompson’s (1984) earlier prediction that participation in distance education is associated with the cognitive style of field-independence.

However, no difference in persistence behaviour was evident in the study, a finding Thompson and Knox (1987) attributed to the tendency towards field-independence that was present in these subjects. The study concluded that the cognitive style of field-dependence/independence may have significant implications for the design and delivery of distance education courses. This finding implies a new meaning to the notion of flexible learning packages, however, it is most unlikely that universities would ever use cognitive style tests as their main selection criterion for course entry (Kember, 1995).

Dille and Mezack (1991) conducted another cognitive style study designed to relate selected aspects of retention and academic success in telecourses, to locus of control, learning style and demographic variables. The main goal of their study was to identify predictors of high risk amongst these students. Other institutions would then be able to use this information to reduce their attrition rates by either better advising high risk students at the enrolment stage or providing a counselling service that may minimise the likelihood of non-completion. However, the limitations of using pre-enrolment information and in this case reasonably stable psychological characteristics as a means of reducing drop-out rates must be kept in mind (Kember, 1995).

### **Billings's Model for Completion of Correspondence Courses**

Recognising the absence of a theoretical framework to adequately account for the non-completion of courses by correspondence students, Billings (1988) proposed an adaptation of Bean and Metzner's (1985) model. Unlike the previous descriptive or cognitive style explanations of withdrawal from distance education (Kennedy & Powell, 1976; Roberts, 1984; Thompson, 1984) the model developed by Billings (1988) was more linear in nature and attempted to explain the influence of a number of factors on student persistence once the student was enrolled at the university (Figure 2.5).



**Figure 2.5**  
**Billings' model for completion of correspondence courses (Billings, 1988, p. 25)**

As can be seen in the above model, Billings (1988) has shown four main groups of variables associated with student persistence. These are background variables, organisational variables, environmental variables, and outcome and attitudinal variables. The specific factors affecting each variable are indicated. Two other intervening variables are also shown, the intent to complete the course and the date of submission of the first lesson. The dependent variable, progress toward course completion, is a measure of the proportion of lessons the student completes. The arrows indicate both the direct and indirect linkages between these variables.

The two intervening variables in the model developed by Billings (1988) emphasise the influence student behavioural patterns may have on the likelihood of course completion. The first of these, the concept of intent, is derived from attitude theories of Fishbein and others (Fishbein, 1967; Kaplan & Fishbein, 1969) and postulates that an individual's beliefs regarding the consequences of behaviour form an attitude about the behaviour which precedes the intention to act. That is, if the student is convinced at the commencement of the course that the benefits of

completion outweigh the inconveniences and disruptions experienced during that period, then they are more likely to persist. The second intervening variable, the date of submission of the first lesson is also shown to reflect the likelihood of course completion. Students who did not submit their first assignment were found to be least likely to complete the course, and students who submitted more than half of the total number of required assignments were significantly more likely to complete the course (Wong & Wong, 1978-79). Furthermore, where students were required to submit an assignment in the first few weeks they were found to be more likely to complete the course (Billings, 1988).

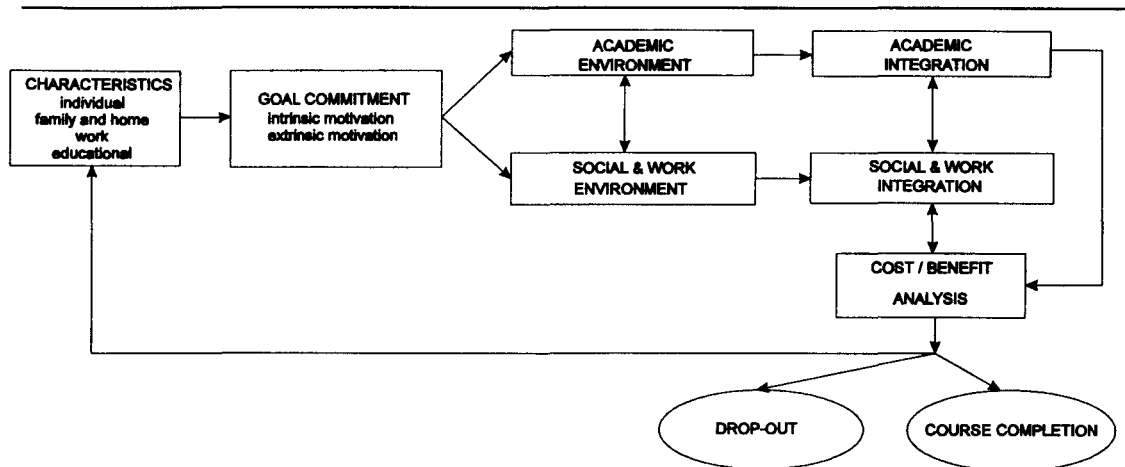
In summary, Billings (1988) through her model for course completion, highlighted the need for the student to maintain self-direction in the course and submit lessons regularly. The variables defined in this model appear to provide a plausible explanation for course completion. However, subsequent to the development of the model by Billings and her acknowledgement that this was only a tentative model, there are no other studies that test the validity or applicability of the model (Kember, 1995).

Sweet (1986) conducted a study to validate Tinto's (1975) theoretical model using adult students enrolled in a distance education program. Some adjustment to the variables specified in Tinto's model was made to accommodate the distance education mode of study. In particular, he broadened the academic integration variable to include a measure of the student's involvement with and reaction to the package of learning materials. Sweet (1986) was also interested in the student's response to the tutor telephone service that was operating. He reported previous support for a positive relationship between student retention and the frequency of individual telephone contact with tutors. The results of the study also indicated that direct telephone contact between faculty and students significantly influenced student commitment and persistence (Sweet, 1986).

Sweet concluded that the theoretical model developed by Tinto (1975) was an appropriate framework for further research on drop-out from distance education. However, Kember (1995, p. 46) states that Sweet has not taken “sufficient note of Tinto’s own caution (1982) that modifications need to be made to his model when applied in non-traditional settings or with non-traditional students”. Furthermore, Kember indicated that none of these previous studies adequately accounted for the impact of family, work and social life on the study patterns of distance education students. On the belief that no adequate conceptual model of student progress in distance education courses existed, Kember set about developing his own.

### **Kember’s Initial Model of Drop-out from Distance Education**

Kember (1989) used Tinto’s (1975) model as a basis on which to develop a model of student drop-out from distance education. Where Tinto’s model investigated the social and intellectual involvement of students with an institution, Kember adapted this aspect of Tinto’s model to include the students’ social, home and work environments and the degree to which distance education students were able to integrate the demands of their studies with those of their family, friends and work colleagues. He recognised the need to consider the students’ characteristics, their motivational states and their academic environments when investigating external student attrition. Kember also acknowledged that distance education students were often mature age, part-time students living in a location that does not readily permit face-to-face contact with their tutor. In developing a model of drop-out from distance education, Kember broadened the concept of social integration originally referred to by Tinto (1975) to include the student’s individual situation and family life (Figure 2.6).



**Figure 2.6**  
**Kember's initial model of drop-out from distance education (Kember, 1989, p. 286)**

---

The first part of Kember's initial model of drop-out from distance education considered student characteristics such as age, sex, educational qualifications and place of residence (Figure 2.6). The significance of such demographic data was not so much the direct influence it may have had on a student's decision on whether to drop-out or not, but on the indirect influence it had through other components of the model.

Kember referred to goal commitment as meaning the student's motivation to study. He further divided motivation into an intrinsic component, "the interest students have in the subject matter for its own sake" (Kember, 1989, p. 287); and an extrinsic component, "the student's commitment to obtaining a qualification" (Kember, 1989, p. 288). Both intrinsic and extrinsic motivation influenced other variables in Kember's (1989) model of drop-out from distance education and again were seen as indirect influences rather than having contributed directly to the student's decision whether to withdraw or continue in the course.

The integration and environment components of Kember's initial model (1989) provided for the long term effects of combining academic endeavours with family, work and social life. The student's goals and their degree of commitment to them were



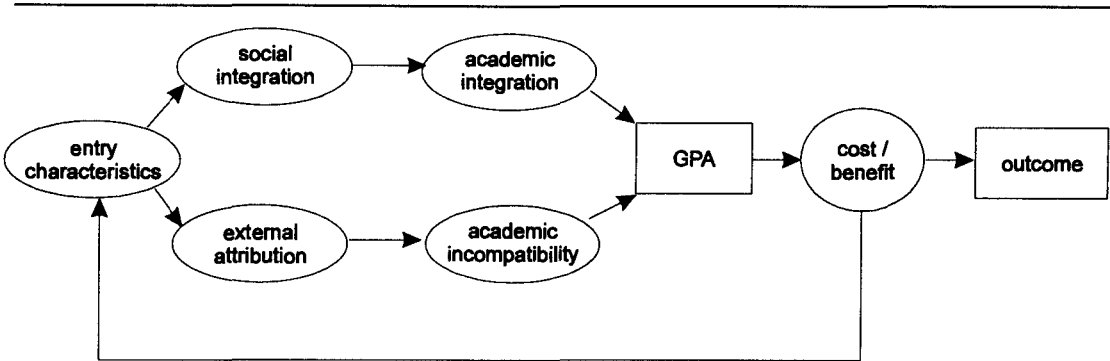
influenced by their individual upbringing, educational background, and current family and work circumstances. The characteristics and goal commitments were major factors affecting the degree to which the student was able to successfully integrate into the academic environment and in turn defined their social and work environment. The influence of such factors as the administrative support service of the institution and the effectiveness of tutor communication illustrated the potential impact these components had in this model of drop-out from distance education.

One of the significant features of Kember's initial model (1989) of drop-out from distance education was that it was linear in nature. That is, variables which appeared in one component affected variables in succeeding components. Taking into account all these influences and changes that occurred in the various components over time, the students made the decision whether to continue in their studies or withdraw. This decision was described by Kember, 1989, p. 295) as a cost/benefit analysis in which "the student has to decide whether the opportunity costs of time spent studying are worthwhile in view of the perceived benefits the student might derive from studying". A student with a higher level of goal commitment and who has a stronger degree of academic and social and work integration would face the cost/benefit analysis situation less frequently than a student with a lower level of goal commitment and weaker degree of academic and social and work integration. All of these variables were in a constant state of change and the student would reassess the relative benefits of remaining enrolled as the course proceeded. The recycling loop in Kember's (1989) model took into account the changing nature of these variables.

### **Kember's Revised Model of Student Progress in Distance Education**

Since developing his initial model of drop-out from distance education (Kember, 1989), Kember has been involved in numerous research studies in Australia, Papua New Guinea, the United Kingdom and Hong Kong that have enabled him to test this model. Drawing upon both qualitative and quantitative data from these studies plus the

available literature, he developed a revised model (Kember, 1995) of student progress in distance education (Figure 2.7).



**Figure 2.7**  
**Kember’s revised model of student progress in distance education (Kember, 1995, p. 55)**

Kember’s (1995) model of student progress in distance education is a linear, two-track model.

The positive track contains factors which lead to high levels of both social and academic integration. The negative track indicates lower levels of integration. The model contains a cost/benefit analysis step in which the student periodically weighs the benefits and costs of continuing to study. At this stage a decision can result in either dropping-out or continuing study. If the latter, a recycling loop leads to another passage through the cycle, usually with the characteristics and variables somewhat changed. If the results of the cost/benefit analyses continue to show positive benefits a student will eventually complete the course (Kember, 1995, p. 55).

**Explanation of Components of Kember’s (1995) Model**

**Entry characteristics**

Although student entry characteristics are not good predictors of outcomes, their indirect influence on other integration variables has provided some useful information (Kember, 1989). For example, sex, age, previous educational qualifications, occupation and region of residence were found to be related to persistence for students enrolled at the Open University of the United Kingdom (Woodley & Parlett, 1983). In another study, Kember (1981) found a significant relationship between

student progress and age, number of children, housing conditions, sex, sponsorship and region of residence. Demographic information of this nature was regarded as being more useful in identifying at-risk students than implying some causation effect of outcomes (Kember, 1995). Kember (1995, p. 76) further stated that “the characteristics, demographic status, educational background and experience of students will play a major part in determining how well the students are able to achieve academic and social integration”. Therefore, as was the case in his initial model of drop-out from distance education (Kember, 1989), Kember has included entry characteristics in his revised model (Kember, 1995) because of their indirect influence on other components of the model rather than directly on outcome.

### **Social integration**

Kember divided the social integration component into three sub-components of enrolment encouragement, study encouragement and the family environment.

- Enrolment encouragement examines the extent to which the employer, family and friends supported the student's decision to enrol in the course. Such initial support has an important bearing upon goal commitment.
- Study encouragement considers the degree of co-operation and moral support the student receives when actually studying.
- The family environment sub-scale determines whether a warm supporting environment exists within the family unit.  
(Kember, 1995, p. 80)

The social integration component of Kember's (1995) revised model deals with the ability of the students to combine study with their work, family and social life. Both the students' entry characteristics and their ability to adapt their lifestyle to part-time study will influence the social integration component of the model. Students with adverse characteristics will have more difficulty integrating the demands of being an external student with their existing lifestyle (Kember, 1995). The attitudes of family, friends and work associates are also an important influence on how well the students are able to combine external study with their usual routine. For example, an employer

who allows study leave or offers financial assistance towards payment of course fees would be seen as supportive. Sufficiently supportive attitudes may also overcome more adverse characteristics or circumstances.

### **External attribution**

Kember has divided the external attribution component into three sub-components which correspond to the most frequent reasons given for student drop-out.

- Insufficient time is the most common reason given for drop-out in autopsy reports and indicates a failure to come to terms with competing priorities.
- Distractions attributes lack of application to study tasks to competing demands from family, employers and friends. It is indicative of a lack of social integration between academic demands and daily life.
- Events hinder study examines the way in which happenings not foreseen at the time of enrolment influence the cost/benefit analysis between continuing and ceasing study.  
(Kember, 1995, p. 91)

The external attribution component of Kember's (1995) revised model deals with those students who have been less successful in integrating the demands of part-time study with their existing lifestyle. Kember (1995, p. 90) also referred to this factor as the "negative social integration component". When asked questions relating to drop-out students frequently account for their withdrawal with reasons substantially beyond their control (e.g., poor quality unit materials, non-availability of text book). Conversely, graduating students are more likely to attribute their success to internal control (e.g., ability, hard work, perseverance). This pattern of behaviour is consistent with attribution theory (Bar-Tal, 1978; Weiner, 1972). The degree of social integration is shown in Kember's (1995) revised model to influence the next major component of academic integration or incompatibility.

### **Academic integration or incompatibility**

Kember's two track model divided academic integration into a positive track of academic integration and a negative track of academic incompatibility. Each is further

divided into sub-scales measuring study approach, motivation, course evaluation and language ability. The positive academic integration sub-scales are as follows:

- Deep approach is the approach to study adopted by those who seek the underlying meaning of what they read and actively relate it to their own experience and needs.
- Intrinsic motivation is manifest by those who are interested in their subject for its own sake.
- Positive course evaluation means that there has been positive student feedback on course materials, tutoring, assignment marking and administration.
- Reading habit examines the extent to which students enjoy reading and read widely.  
(Kember, 1995, p. 101)

The negative academic integration sub-scales are as follows:

- Surface approach is the approach adopted by students who focus on the surface aspects of a text. They tend to concentrate on trying to rote-learn factual details which they presume will be relevant to examination questions.
- Extrinsic motivation is that provided by rewards external to the course such as increased promotion opportunities or pay rises if a course is passed.
- Negative course evaluation also examines course materials, tutoring, assignment marking and administration, but this time the student feedback is more negative.
- Language ability is a measure of the students' ability in the language of instruction.  
(Kember, 1995, p. 102)

In contrast to previous models (Spady, 1970; Tinto, 1975) where students were full-time and teaching predominantly in a face-to-face situation, academic environment in Kember's (1995) model referred to all aspects of the student's contact with the institution. This included the study package mailed to students, any interaction between the tutor and student (e.g., telephone counselling, assignment feedback, on-line tutorials) and contact of an administrative nature (e.g., course counselling, enrolment advice, assignment extension requests).

The approach to study and motivation sub-scales are those defined by Entwistle and Ramsden (cited in Biggs & Moore, 1993, p. 315) and referred to in their Approaches to Study Inventory (ASI). The student's approach to learning reflects their current motivation and is able to be varied according to the nature of the task and the means by which they will achieve it. An awareness of the impact of these variables on content and curriculum design is therefore important when considering the degree of academic integration.

### **Course completion or drop-out**

As was the case in his initial model (Kember, 1989) the final component in Kember's (1995) revised model is a cost/benefit analysis by the student. "The student has to decide whether the opportunity costs of time spent studying are worthwhile in view of the perceived benefits of the eventual qualification, the interest in the course, or other benefits the student might derive from studying" (Kember, 1995, p. 122). That is, the student is confronted with many of the reasons often given for course withdrawal and forced to make a decision regarding them. As the variables incorporated in Kember's model are constantly in a state of change, it is quite common for external students to make decisions in relation to progress at various times and stages in their course.

The recycling loop in the model accommodates the changing nature of these variables. The frequency of decisions relating to the cost/benefit analysis is seen as a reflection of the stability of the students' entry characteristics and their strength of commitment. The incorporation of the recycling loop into the model also enables the students to accept more responsibility towards which track they will follow. No longer need they be "locked into an inevitable path towards either success or failure" (Kember, 1995, p. 127). Furthermore, not only do the students have an influence on their progress in terms of their attitude and effort, but the institution also has a role to

play in student progress through their policy decisions and actions that effect the learning environment.

### **Testing of Kember's (1995) Model**

Using his earlier theoretical model of drop-out from distance education (Kember, 1989) Kember became involved in a number of projects spanning several years which resulted in considerable data being collected, analysed and interrelated to substantiate and refine his model. Kember's (1995) revised model of student progress is a result of the further analysis of data from a diverse range of courses and university environments.

### **Qualitative data sources**

Kember had five main sources from which he derived his qualitative data. He examined the data initially in the context of the study in which they were collected, and then combined the data from the five studies and reported them according to the variable being investigated. The first of these were the case notes by student counsellors from the Open University in the United Kingdom that had previously been investigated by Kennedy & Powell (1976). The resulting descriptive model (Kennedy & Powell, 1976) discussed earlier concerning personnel characteristics and life circumstances is far less comprehensive than Kember's latest model.

The second source of qualitative data were the interviews of students who were at least 21 years old, who had been in the workforce for at least two years and who did not meet the normal university entry requirements, and who were undertaking a Matriculation Studies course at the University of Papua New Guinea (Kember, 1981). The mostly face-to-face interviews were loosely structured around questions concerning the students' ability to cope with part-time study at a distance. Issues raised by the students were then followed up with more specific questions.

The results of a questionnaire administered to students who withdrew from their external unit during the two year period 1983 to 1985 at the University of Tasmania

provided the third source of data (Osborne, Kilpatrick & Kember, 1987; cited in Kember, 1995, p. 60). These students were asked open ended questions relating to their reason for withdrawal and also provided suggestions for improvements to courses and services.

The fourth study was conducted by Roberts, Boyton, Buete and Dawson (1991) using distance education students attending a residential school session at Charles Sturt University. Roberts et al. used Kember's (1989) model of drop-out from distance education as the basis for the study. In a semi-structured interview situation each student was asked a series of questions relating to all five components of the model. In this case Kember's model was being used more as a means of investigating student progress rather than being limited to an explanation of attrition.

The final source of data came from an investigation of seven open learning programs being conducted in Hong Kong in the late 1980s. Each of the distance learning programs was print based but supplemented by some form of media package such as audio or video tapes. Qualitative data were gathered by semi-structured interviews with 60 students randomly selected from the total population (Kember, Lai, Murphy, Siaw, Wong & Yuen, 1990). Each interview lasted between 30 and 45 minutes and students were interviewed individually. They were asked about the strengths and weaknesses of the course and made suggestions to improve it.

### **Quantitative data sources**

The DESP inventory was developed and tested using students from three of the Hong Kong programs. These programs were in Textiles and Clothing, Taxation and Business Administration and ranged in level from certificate level to masters degree. Some of these students were also involved in the qualitative studies described above. In this case however, the DESP questionnaire was administered to all students enrolled in the course (Kember, Lai, Murphy, Siaw & Yuen, 1992).



In the developmental stage, the DESP inventory contained items which formed sub-scales for each of the components of the model of drop-out from distance education (Kember, 1995). Information from the questions relating to background characteristics enabled a profile of the student to be built. The first component, social integration, was made up of three sub-scales: enrolment encouragement (three items), study encouragement (two items) and family support (two items). The external attribution component had four sub-scales: insufficient time (four items), events hinder study (two items), distractions (five items) and potential drop-out (two items). The academic integration component had five sub-scales: deep approach (four items), intrinsic motivation (four items), positive course evaluation (four items), positive telephone counselling (two items) and reading habit (two items). Finally, the academic incompatibility component also had five sub-scales: surface approach (six items), extrinsic motivation (four items), negative course evaluation (six items), potential drop-out (two items) and English ability (four items).

In addition, Kember (1995) reported the use of two outcome variables in his model. These were the student's GPA and a ratio score of the number of modules failed over the number of modules attempted. The ratio score ranged from zero for a student who had passed all modules, to one for a student who had failed all modules. This ratio was used as a measure of student persistence. The information relating to outcome variables was not obtained by Kember from the DESP inventory but from the student record system.

### **Incorporation of Data Sources into the Model**

Using factor analysis and reliability tests Kember (1995) confirmed that the DESP inventory contained reasonable measures of the components and sub-components derived from the qualitative data. Using path analysis he was then able to test the fit of the quantitative data to the conceptual model.

As predicted in previous models (Tinto 1975; Kember, 1989) Kember found student background characteristics were not directly related to outcome variables. They did, however, have a relatively strong influence on the social integration and academic integration variables which, in turn, related to the student progress variables. The results also supported the prediction that students were not predestined by their entry characteristics to pass, fail or drop-out. Rather, their progress was a process of adaptation and development that was influenced by a number of intervening variables such as the quality of the course, the academic support environment and the degree to which the student was able to mesh the demands of academic study with work, family and social needs (Kember et al., 1992). The results of the DESP inventory were a measure of the influence of these intervening variables. The social integration factor was found to have a significant correlation with academic integration but not with academic incompatibility. The external attribution factor was found to have a strong correlation with academic incompatibility but a much less significant one with academic integration. For example, students who received support and encouragement from family, friends and employers were able to cope better with their study at home and found it easier to come to terms with the academic demands than students whose personal lives continually disrupted their distance education courses. Kember et al. (1992) concluded that the path model resulting from that initial quantitative test showed a good fit to the model derived from the qualitative data.

Following the initial testing of the DESP inventory items which did not contribute to scales were deleted and extra items were added to some sub-scales. The revised DESP inventory was then administered to students enrolled in three open learning programs in Hong Kong (Kember et al., 1994). Two of the groups in this replication study were teachers upgrading their qualification to a Bachelor of Education degree and the third group was a random sample drawn from a range of courses in arts, business and science offered by the Open Learning Institute of Hong Kong. The

resulting path model confirmed the results of the initial test, that the model of drop-out from distance education resulting from the quantitative data showed a good fit to the model derived from the qualitative data. Although not all the variance in student persistence could be explained by the model, Kember (1995, p. 155) stated that “the model can, with reasonable confidence, be used to make predictions and derive implications for practice”.

## **CONCLUSION**

Attrition in higher education is a complex phenomenon that has been extensively investigated over the past three decades. Early attempts to isolate a single or a small number of variables primarily responsible for attrition proved to be either unsuccessful or could not be substantiated by subsequent research. Further investigations considered the possible link between the academic and social environment of the institution, and the attributes of students with attrition and persistence in higher education. As a result of these studies a number of theoretical models were developed to identify the most important factors relating to attrition and persistence.

This review of the literature has been particularly concerned with attrition in distance education, where drop-out rates are usually much higher than those for comparable courses for full-time on-campus students. Taking into account the distinguishing features of distance education, available theoretical frameworks were modified and models developed to explain external student attrition. One model (Kember, 1995) that is based on sound theoretical constructs and that has been trialed in a number of qualitative and quantitative studies is reported in detail. Kember's (1995) model takes into account not only students' entry characteristics, but students' learning styles and the ability of the students to combine study with their work, family and social life. The literature indicates there is some benefit to be obtained from using demographic data (e.g., place of residence, nationality) and entry characteristics (e.g., age, education qualifications) to build a profile of students enrolled in a particular

course at a tertiary institution. This information assists both the student service administration to offer more effective pre-enrolment counselling, particularly in relation to the number of units undertaken; and for academic staff to identify more at-risk students. The vulnerability of students in their first unit in a course or their first year of study is widely acknowledged.

The issues relating to both the quality and quantity of contact between staff and students needs to be addressed in studies of attrition. Attrition rates are reduced where there has been an increase in the number of contacts and an improved means of two way communication between the tutor and students. Tutor initiated contact has been shown to benefit at-risk students most. Written forms of communication, usually in the form of assignments, and the resulting feedback have been a longstanding component of distance education.

This literature review highlights the complexity and multivariate nature of attrition from distance education. Kember's (1995) model seems to accommodate the changing nature of the variables associated with attrition and indicates that both the student and the institution have a role to play in this process.

## **CHAPTER 3. METHODS**

The methods chapter describes the procedures, instruments and data analyses used in this study. The first section describes the general research design and includes an outline of the variables under investigation. The subsequent sections discuss the subjects, sampling, and the nature and extent of the information collected to answer the research question. The procedures used to collect the data are described. Finally, the chapter concludes with a description of how the data were analysed to answer the research question.

### **DESIGN**

#### **Description of the Study Design**

Data were obtained from the computerised student records system and two self-administered questionnaires. These data related to a number of variables associated with attrition and persistence for external students enrolled in the Fourth Year of the Bachelor of Education award. The two self-administered mail out questionnaires (one before semester commenced and the second at the time of withdrawal or after week 10 of semester) and a consent form were sent to all students enrolled in the Fourth Year of the Bachelor of Education course in second semester, 1995. The data obtained from these questionnaires and the university student records system were used to answer the following specific research questions:

1. To what extent do any or all of the following variables relate to attrition and persistence of external students enrolled in the Fourth Year of the Bachelor of Education course at the university?

- age
- gender
- number of years of teaching experience
- number of years since completing pre-service training
- stage in the course (completed one or two of eight units)
- current occupation (teacher, principal, home duties, student)
- geographic location (metropolitan, country, and interstate)
- method of communication with tutor, other students and external studies (electronic mail, post, phone, facsimile)
- administrative issues (quality of unit materials, late enrolment or receipt of unit materials, out of print texts, delays in assignment return)
- personal circumstances (e.g., separation from spouse)
- work related issues (e.g., change of school)
- perceived benefit of completing the course
- relevance of unit content to perceived career needs and interests

2. To what extent are any of the following sub-scales and scales developed from the DESP inventory (Kember et al., 1995) associated with attrition and persistence of external students enrolled in the Fourth Year of the Bachelor of Education course at the university.

#### Social Integration Scale

- Enrolment encouragement
- Study encouragement
- Family support

#### External Attribution Scale

- Insufficient time
- Events hinder study
- Distractions
- Potential drop-out

#### Academic Integration Scale

- Positive impression of the course
- Positive telephone counselling

- Reading habit
- Deep approach
- Intrinsic motivation

#### Academic Incompatibility Scale

- Negative impression of the course
- Extrinsic motivation
- Surface approach
- Potential drop-out

### **Rationale for the Study Design**

Kember's (1995) model to explain student progress in distance education provided the conceptual framework for the study (Figure 2.7). The linear nature of Kember's (1995) model recognises the multitude of variables that influence a student's decision on whether to continue or not in a course. The specific research questions posed in the Fourth Year of the Bachelor of Education study acknowledge the diversity of variables that may relate to attrition and persistence of external students. Data were collected pertaining to all components of Kember's (1995) model and the extent to which the variables related to aspects of student progress was investigated. The DESP inventory was chosen as an appropriate instrument to collect data on attrition and persistence in the course under investigation as it has been extensively used to investigate persistence in tertiary education overseas, and its reliability and validity have been scrutinised (Kember et al., 1994; Kember 1995). Use of the DESP inventory also provided an opportunity to examine the applicability of Kember's (1995) sub-scales and scales to a student's decision to withdraw or persist with a course of study for students enrolled externally in the Fourth Year of the Bachelor of Education at a university in Western Australia.

Self-administered mail out questionnaires were chosen due to the sample size, geographical location of students and the nature of the data to be collected.

Information obtained from the student records system was not duplicated in the questionnaires. As it was envisaged that students' perceptions of studying externally

and their personal circumstances may have changed during the course of the semester, two questionnaires were used. The first questionnaire was mailed prior to the start of the semester to collect data about student perceptions of studying in the forthcoming semester. The second questionnaire was mailed to students who withdrew from their enrolled unit along with confirmation from External Studies of their withdrawal. Those students who continued in their studies were mailed the second questionnaire after week 10 of semester to enable them to complete and return it before the examinations. The second questionnaire sought information about the students' views and experiences associated with studying externally during that semester. The questionnaire also contained duplicate questions from the first questionnaire, the DESP inventory and where appropriate, the students' reason(s) for withdrawal. This enabled changes in perceptions and circumstances during the semester to be recorded.

## **DATA SOURCES AND INSTRUMENTS**

Much of the data from the university records system and the questionnaires were of a descriptive nature, enabling a profile of students enrolled in the Fourth Year of the Bachelor of Education course to be constructed. In addition, data were collected on students' perceptions of studying externally and the extent to which expectations changed or affected their educational experiences that semester. The sources of data used in this study are summarised in Table 3.1. The university computerised records system provided personal details about each student (e.g., age, gender, home address) and academic history (e.g., number of units enrolled, number of previous withdrawals, stage in the course).



**Table 3.1**  
**A summary of the data sources used in the study**

<b>Student records</b>	<b>First questionnaire</b>	<b>Second questionnaire</b>
Name	Name	Name
Student ID number	Student ID number	Student ID number
Age	Years of teaching experience	Means of communication with Ext. Studies and tutor
Gender	Years since completing teaching training	Adverse influences on studies
Geographic location	Course expectations	Satisfaction with communic from Ext. Studies and tutor
Stage in course	Perceived ability to cope with unit materials	Difficulties encountered studying externally
Academic history	Perceived usefulness of course	Applicability of unit material
		Reasons for withdrawal*

\* This question was only for those students that withdrew.

The initial questionnaire (Appendix A) requested information of a descriptive nature that was not available from the student records system. The responses to questions in the first questionnaire included details of the students' current positions, the year in which they completed their most recent teaching qualification and their number of years of equivalent full-time teaching/education administration experience (Questions 3, 4 and 5). Each student was asked their preferred mode of study (on-campus/internal or external; Question 6). The remaining questions concerned their expectations of the institution, both from an administrative and an academic point of view, and their perceptions of what it would be like to study externally (Questions 7-11).

The second questionnaire (Appendix B) requested information about the students' experiences of studying externally that semester. In particular, information was sought about their main method of communication both with their tutor and staff in external studies (Questions 3 and 6), and their degree of satisfaction with that form of

communication (Questions 4 and 7). Students were asked about the applicability of the unit materials to their professional needs (Question 5) and their degree of satisfaction with feedback from tutors on their assignments (Question 8). Questions were also asked about aspects of the students' personal circumstances that may have adversely affected their studies during the semester (Questions 9 and 10). Those students who discontinued their studies were asked their reason(s) for withdrawing (Question 11).

The DESP inventory developed by Kember et al. (1995) was included in the second questionnaire. This inventory contained items which, based on a first-order factor analysis, were used to form the series of 11 sub-scales and a second-order factor analysis on these 11 sub-scales and 4 ASI sun-scales to form 4 scales ("social integration", "academic integration", "external attribution" and "academic incompatibility") that are the major components of the model for drop-out behaviour from distance education (Kember, 1995; Figure 2.7).

Responses to the second questionnaire were also used to identify changes in student perceptions and personal circumstances during that semester (e.g., change in employment, health problems). In addition, the second questionnaire identified problems associated with the student's studies in that particular unit (e.g., turn-around-time for assignments, communication with tutor).

## **SUBJECTS**

All external students who were enrolled in the Fourth Year of the Bachelor of Education award as of the 27 June 1995, who were resident in Australia and who had selected units for second semester were invited to participate in this study. The study population was 504 students.

The letter informing students about this study (Appendix C), the consent form (Appendix D) and the first questionnaire were mailed to these 504 students between the 29 June and the 3 July 1995. By the 20 July, 197 responses had been received. Three of these were discarded as the students had either not completed the

questionnaire or had not signed the consent form. A follow-up letter including a copy of the consent form and the first questionnaire were mailed between the 21 July and the 24 July 1995 to those students who had not responded to the initial invitation to participate in the study. This action prompted a further 108 student returns, bringing the total number of students who would be monitored during the next stage of the study to 302 (59.2% of the study population).

## **PROCEDURE**

### **Prior Approvals**

As this study involved human subjects, approval was obtained from the university committee responsible for the conduct of ethical research to access student records and to administer the questionnaires. Approval was obtained to use the DESP inventory (D. Kember, personal communication, 24 March, 1995; see Appendix E) in an investigation of student progress for external students enrolled in the Fourth Year of the Bachelor of Education course in second semester, 1995. The nature and purpose of the study was outlined in a letter to the students. Only those students who completed and signed the consent form were included in the study. Students were reassured that information obtained would remain confidential and that their anonymity would be guaranteed in all subsequent publications.

### **Pilot Study**

Draft questionnaires were given to two senior staff in External Studies. These people were asked to complete the questionnaires assuming they were students enrolled externally in the Fourth Year of the Bachelor of Education award. Based on their responses, further draft questionnaires were prepared for use in the formal pilot study.

A pilot study was conducted during the previous semester using 32 randomly selected students (i.e., every fourth person on the class list) from one of the core units

of the Fourth Year of the Bachelor of Education course. Eight students from this group subsequently withdrew from their studies. Telephone contact was made with six students who participated in the pilot study to seek their views on the clarity and adequacy of the questions to which they had responded. An analysis of the data obtained was undertaken to ensure the research questions would be satisfactorily answered. Minor wording amendments were made to two questions to avoid any ambiguity.

## **Main Study**

The initial questionnaire was mailed to students about three weeks before the commencement of second semester (i.e., between 29 June and 3 July). By this date, those students who had been enrolled in semester one had finished their first semester examinations and were awaiting their results. Offers of enrolment for commencing students in the Fourth Year of the Bachelor of Education award had been made and the majority of student acceptances had been processed. As the first questionnaire was particularly concerned with the students' perceived expectations about studying externally, their ability to cope with the unit material and the usefulness of the course, it was important that they received the initial questionnaire before semester commenced. By early July, it was considered that most students who would be studying externally in this award in second semester would have been enrolled and would be preparing themselves for their next semester of study (e.g., purchase text books, organise work and family commitments around a proposed study time-table). The timing of the mail out of the initial questionnaire allowed for a follow-up letter and another questionnaire to be posted to those students who had not responded promptly to the first one and for them to return it while still in the early part of the semester.

Students were advised at the commencement of the study (see Appendix C) that they would be asked to complete two questionnaires, one before semester commenced and a second during the semester. A settling down period was allowed up

to the commencement of week 3 of semester, during which time students could change their enrolment. After week 3, those students still enrolled who had agreed to participate in the study and who withdrew from any unit in the course, were mailed the second questionnaire. The second questionnaire was mailed to students with their confirmation of withdrawal notice and included a reply paid envelope for the return of their response. This version of the second questionnaire included the question relating to the student's reason(s) for withdrawal. A telephone follow-up was made to those students who had not returned the second questionnaire after 10-14 days. Where appropriate another copy of the questionnaire was mailed to them.

Students who withdrew after the end of week 10 (6 October 1995) were deemed by the university to have failed that unit. Most students were well aware of the last date for withdrawal without academic penalty and if they had any concerns about their ability to continue in their studies, they usually made the decision to withdraw before this date. Those students who had agreed to participate in the study and who were still enrolled after 6 October (242 students) were sent the second questionnaire, (the same as the second questionnaire mailed to those students who withdrew, but without the question relating to their reason for withdrawal) on 11 October, 1995. A follow-up second questionnaire was posted two weeks later to the continuing students who had not returned the second questionnaire (116 students). The responses to all questionnaires received by 14 November, 1995 were included in the data analyses.

### **Reliability and Validity**

Drafts of the two self-administered questionnaires were shown to experienced staff in the Department of External Studies. Responses from those people were used to modify questions to ensure they were clear and concise, and that they provided the appropriate information to answer the specific research questions. Data from the pilot study was reviewed by two senior academics within the university to improve the content validity of the questions.

The DESP inventory was used to provide specific information relating to Kember's (1995) model and has been tested for both its reliability and validity (see Kember et al., 1992, 1994 and Kember, 1995) for students enrolled at the Hong Kong Polytechnic University.

## **DATA ANALYSES**

Profiles of continuing and withdrawn students were developed using data collected from the two questionnaires and from student records (e.g., age, gender, geographic location, years of teaching experience, perceived usefulness of the course, method of communication with tutor, form of material provided, stage in the course, etc). It was assumed that the results obtained from the sample (i.e., from those students who signed the consent form and completed both questionnaires) were representative of the study population. Inferential statistics have therefore been used to determine differences between groups in the population (e.g., continuing and withdrawn students). Significant differences between the responses to demographic and perception questions by continuing and withdrawn students were determined by *t*-tests and Chi-square tests (Blackmore, 1994). Although many of the figures display results as percentages, all Chi-square tests were applied to frequency data. Chi-square test results have only been reported where minimum expected cell frequencies have been obtained (Cochran, 1954; Blackmore, 1994). The capacity of variables known prior to students commencing their studies (e.g., age, gender, geographical location, stage in the course) to distinguish between continuing or withdrawing students were determined by discriminant analysis. Chi-squared and discriminant analyses were performed on variables associated with, or that arose during the course of study (e.g., communication with tutor, turn-around-time of assignments, work and personal issues) to determine the extent to which these questions differentiated between students continuing or withdrawing from units. Discriminant and correlation analyses were performed on the DESP inventory question responses, sub-scales and

scales to determine the extent to which these sub-scales and scales differentiated between continuing and withdrawn students. A factor analysis was performed on Kember's (1995) 15 sub-scales, using the data collected in this study, to determine the congruence between the factors emanating from this study and those reported for students enrolled in distance education courses in Hong Kong (Kember et al., 1992). The procedures used by Kember et al. (1992) for creating sub-scales and scales from a factor analysis using principal component analysis of students' responses to the DESP inventory were duplicated to determine the congruence between their sub-scales and scales and those resulting from this study. Student scores for DESP items linked with a particular factor were either summed or subtracted depending on whether they were positively or negatively associated with the factor (see Table 4.6) to compile the variables for the second-order factor analysis. Only factor loadings greater than 0.30 were considered to be significant (Tabachnick and Fidell, 1989).

Discriminant function analysis is used to predict group membership from a set of predictors. Classification techniques such as discriminant function analysis, generally make fewer statistical demands than do inferential statistics (Tabachnick and Fidell, 1989). Where classification is the primary goal, as was the case in this study, discriminant function analysis is considered to be robust unless the data contains outliers, or sample sizes are unequal or small and there is heterogeneity of the variance-covariance matrices (Tabachnick and Fidell, 1989). Caution therefore should be exercised in the interpretation of the discriminant analysis results in this study as the sample sizes for continuing and withdrawn students were generally not equal.

Statistical confidence limits in all cases were  $p = < 0.05$ . Only factors with eigenvalues greater than 1.0 are considered important (Tabachnick and Fidell, 1989). A scree test was used in conjunction with the eigenvalues to determine which factors were important (Tabachnick and Fidell, 1989). Means are reported with  $\pm 1$  SE throughout. Gender, geographical location (metropolitan or other) and choice of study

mode were entered into discriminant analyses as dummy variables; 0 or 1. All statistical analyses were undertaken in the PC Windows version (V. 6.1.2) of SPSS (1995).

The methods chapter has described the research protocol and sample used to investigate the variables associated with attrition and persistence of external students enrolled in the Fourth Year of the Bachelor of Education course. Data obtained from the student records system and the two self-administered questionnaires have been analysed and the results presented in the next chapter.



## **CHAPTER 4. RESULTS**

The results chapter reports the extent to which a range of variables affected external Fourth Year Bachelor of Education students' decisions to continue or withdraw from units in semester two, 1995. The first section presents data related to the background characteristics (e.g., age, sex, number of years teaching experience, stage in the course) of the study group. These data are organised to show differences (where they exist) between the profiles of continuing and withdrawn students. The second section presents data for other variables (e.g., work related issues, perceived benefit of completing the course, administrative issues, method and efficiency of communication with tutors and External Studies) that may also be related to attrition and persistence by external students. The final section reports data from the DESP inventory and the relationship of Kember's (1995) sub-scales to the academic progress of study participants. Some of the many written responses to questions are used as examples to illustrate the nature of students' views when the particular issues are discussed in the next chapter.

All external students who were enrolled in the Fourth Year of the Bachelor of Education award as of the 27 June 1995, who were resident in Australia and who had enrolled in units for second semester, were invited to participate in this study (504 students). Three hundred and two of these students (59.2%) agreed to participate in the study by returning the consent form (Appendix D) and the initial questionnaire (Appendix A), and of these, 258 (51.2%) students submitted useable follow-up questionnaires by the 14 November, 1995. Sixty one of the 258 students (23.6%) withdrew from at least one unit during the course of the semester.

## **Background Characteristics**

Information relating to student background characteristics has been included in the current study because it has been shown to have an indirect influence on other variables related to student progress (Kember, 1981, 1989, and 1995; Woodley & Parlett, 1983). A profile of a typical student enrolled externally in the Fourth Year of the Bachelor of Education award during second semester, 1995 was constructed from data relating to a range of demographic variables that were acquired from both university student records and the first few items on the initial questionnaire.

The results compare the profiles of continuing and withdrawn students; where “continuing” refers to those students who were still enrolled at the end of week 10, and “withdrawn” refers to those students who had been enrolled at the commencement of week 3 of semester but who had subsequently advised the university that they did not wish to proceed with at least one unit in which they had enrolled.

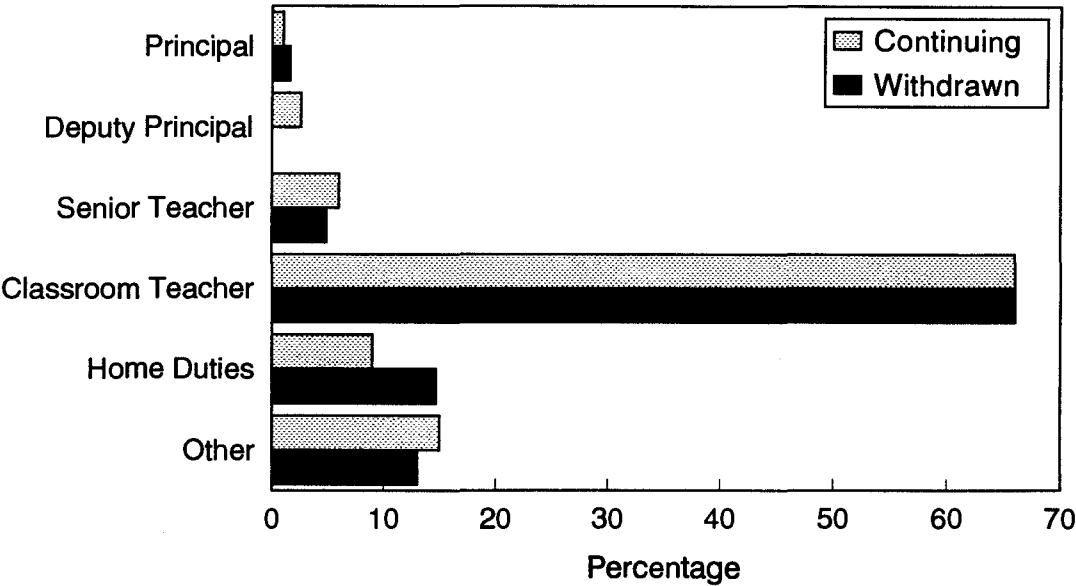
Table 4.1 indicates that there was no significant difference between the mean ages of continuing and withdrawn students. Similarly, there were no significant differences between these two groups in the mean number of years since the study participants completed their last teaching qualification or the number of previous withdrawals from units in this course. Table 4.1 shows that of all the students in this study, 67.8% had not previously withdrawn from a unit, 15.5% and 9.3% of students had previously withdrawn from one and two units respectively.

**Table 4.1**  
**A comparison of the demographic characteristics of continuing and withdrawn students**

<b>Characteristics</b>	<b>All students</b>	<b>Continuing students</b>	<b>Withdrawn students</b>	<b>t, df, p value</b>
Age (years)	32.71 ± 0.52	32.77 ± 0.58	32.49 ± 1.14	0.23, 256, 0.818
Number of years since completion of last teaching qualification	8.77 ± 0.41	9.09 ± 0.47	7.73 ± 0.84	1.40, 253, 0.161
Number of years teaching experience	6.45 ± 0.34	6.91 ± 0.41	4.95 ± 0.56	2.43, 254, 0.016
Stage in course*	3.71 ± 0.14	3.95 ± 0.16	2.90 ± 0.29	3.21, 256, 0.002
Course average	63.56 ± 1.14	65.16 ± 1.15	58.38 ± 3.03	2.55, 256, 0.011
Number of previous withdrawals	0.69 ± 0.09	0.67 ± 0.10	0.77 ± 0.16	0.48, 256, 0.630
Number of semesters successfully completed	2.86 ± 0.12	3.02 ± 0.14	2.38 ± 0.24	2.22, 256, 0.027

\* Stage in course equates to the number of units successfully completed

Table 4.1 indicates there were significant differences between continuing and withdrawn students for the mean number of years of teaching experience ( $t = 2.43$ ,  $df = 254$ ,  $p = 0.016$ ), the mean stage in the course ( $t = 3.21$ ,  $df = 256$ ,  $p = 0.002$ ), the mean course average ( $t = 2.55$ ,  $df = 256$ ,  $p = 0.011$ ) and the mean number of semesters successfully completed in the course ( $t = 2.22$ ,  $df = 256$ ,  $p = 0.027$ ). The withdrawn students had less teaching experience, had satisfactorily completed fewer units and semesters of study in this course, and had lower course averages than the continuing students.

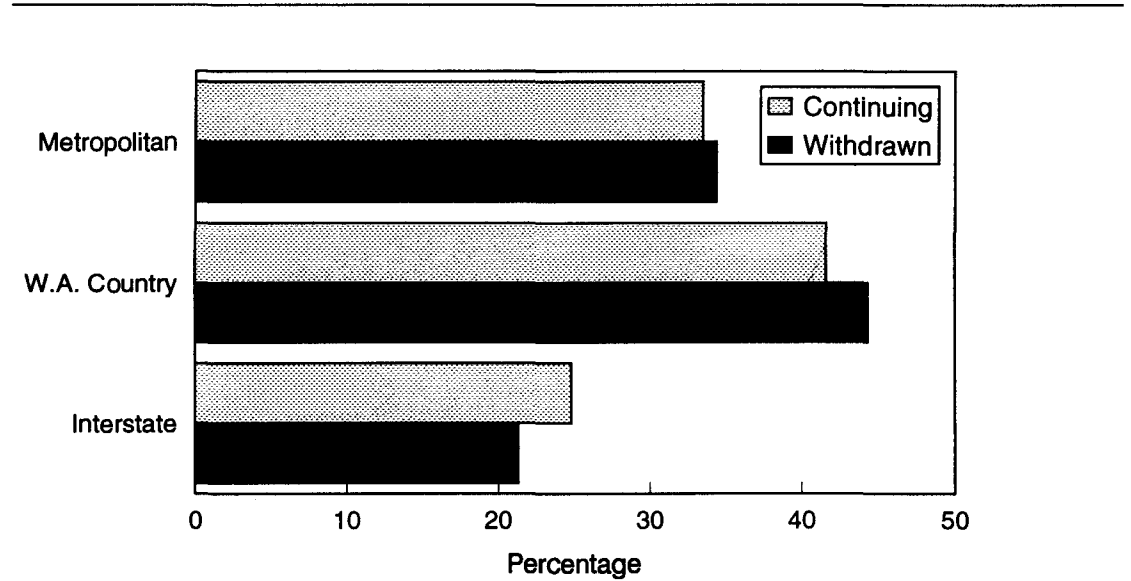


**Figure 4.1**  
**Current occupation of study participants**

There was a higher proportion of female students in the sample (84.5%), however, there was no significant difference between the genders for continuing and withdrawn students ( $\chi^2 = 0.35$ ,  $df = 1$ ,  $p = 0.56$ ). A third of the students (33.5%) would have preferred to have been enrolled in the internal or on-campus mode but there was no significant difference ( $\chi^2 = 1.25$ ,  $df = 1$ ,  $p = 0.27$ ) between continuing and withdrawn

students for choice of study mode. Figure 4.1 shows that the majority of students were classroom teachers (66%) and that there was no significant difference ( $\chi^2 = 2.51$ ,  $df = 3$ ,  $p = 0.47$ , collapsed principal, deputy principal and senior teacher positions into one group to achieve minimum cell frequency sizes) between continuing and withdrawn students for their current employment position.

Figure 4.2 shows the geographic location of study participants classified as either metropolitan, Western Australian country or interstate. Most of the students lived in Western Australia (75.9%;) and there was no significant difference ( $\chi^2 = 0.33$ ,  $df = 2$ ,  $p = 0.85$ ) between continuing and withdrawn students for geographic location.

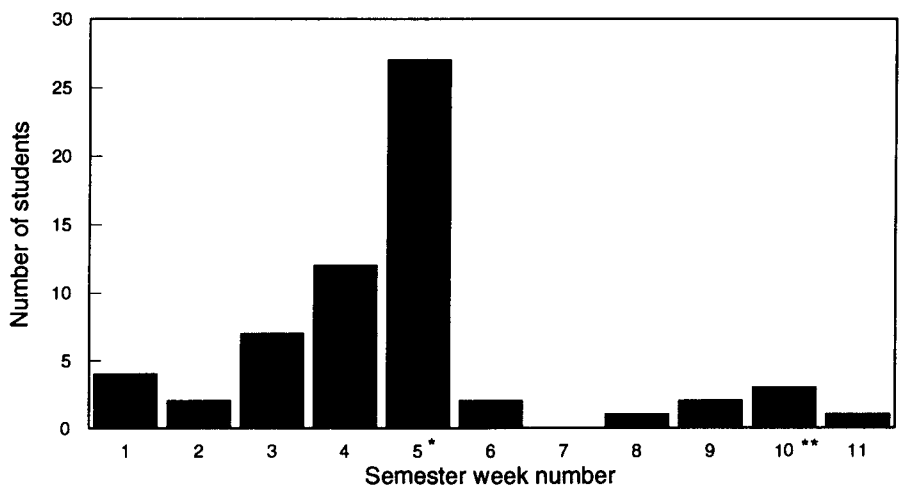


**Figure 4.2**  
**Geographic location of study participants**

---

**Withdrawal Dates**

The number of withdrawals for each week of the semester is shown in Figure 4.3. Fifty two (85%) of the students in the study group who withdrew from at least one unit during the semester did so before the last date for withdrawal without financial penalty. A further eight students withdrew between week six and the end of week 10, the last date for withdrawal without academic penalty.



**Figure 4.3**  
**Withdrawal dates**

\* End of week 5, last date for withdrawal without financial penalty

\*\* End of week 10, last date for withdrawal without academic penalty

---

**Reasons for Withdrawal**

The students' written responses for reasons for their withdrawal were placed in six categories. Table 4.2 indicates that "work", "family" and "study" commitments were the most commonly reported reasons for withdrawal.

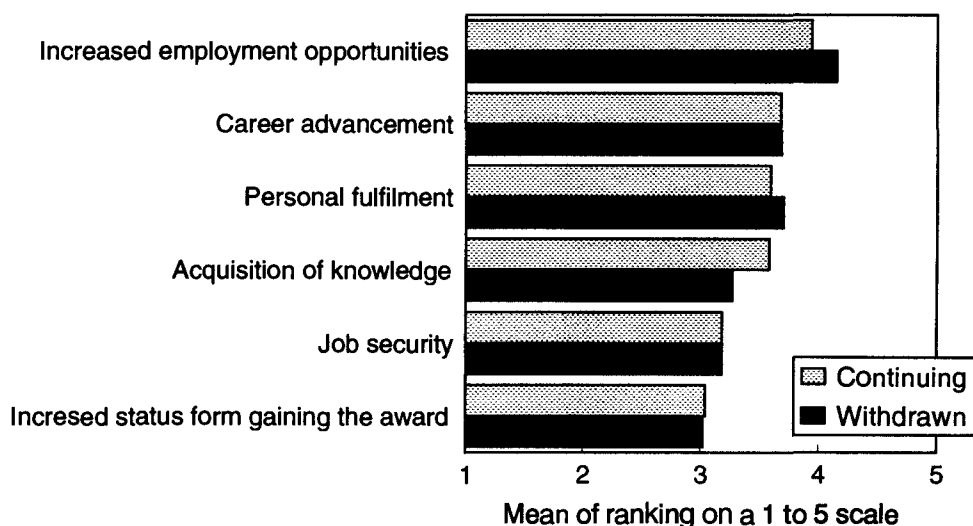
**Table 4.2**  
**Written responses for reasons for withdrawal expressed as a percentage of total number of students withdrawn**

Reason(s) for withdrawal	Percentage
Work commitments	52.46%
Family commitments	49.18%
Study commitments	49.18%
Insufficient time	29.51%
Ill health	14.75%
Study load	14.75%

Multiple reasons for withdrawal given by students resulted in total percentages being >100%.

**Benefits to be Gained from Completing the Course**

Figure 4.4 indicates that students ranked "increased employment opportunities" and "career advancement" as the two most important benefits to be gained from completing the course, and "increased status" as the least important benefit that they expected to gain from completing this course. There was no appreciable difference between continuing and withdrawn students in their ranking of these perceived benefits.



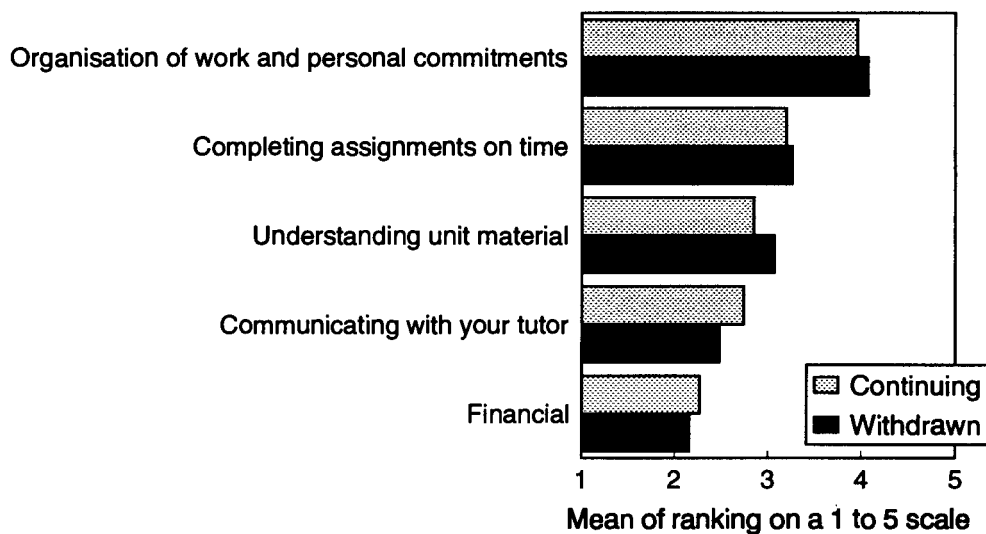
**Figure 4.4**  
**Ranking of perceived benefits associated with completing the course**

---

### **Difficulties Associated with Studying Externally**

When asked to rank perceived difficulties associated with studying externally, Figure 4.5 indicates that students considered “organisation of work and personal commitments around their study” and “completing assignments on time” the greatest concerns and “financial considerations” the least concern. The rankings of perceived difficulties (beginning of semester) and encountered difficulties (end of semester), shown in Figure 4.6, remained the same. There was no appreciable difference between continuing and withdrawn students in their ranking of these perceived and encountered difficulties other than that withdrawn students expressed slightly less concern about “organisation of work and personal commitments “ and slightly greater concern about “financial” considerations.

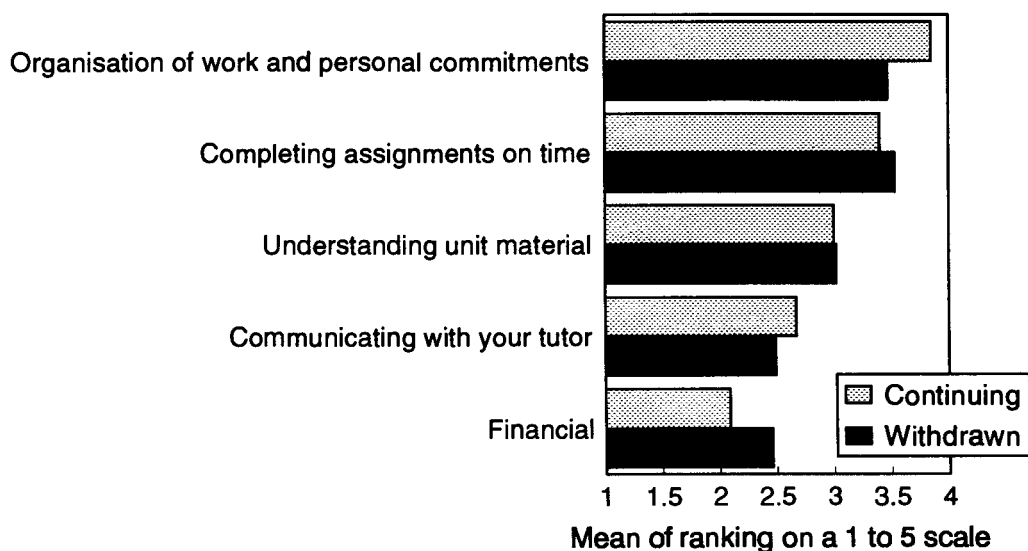




---

**Figure 4.5**  
**Ranking of perceived difficulties of studying externally**

---



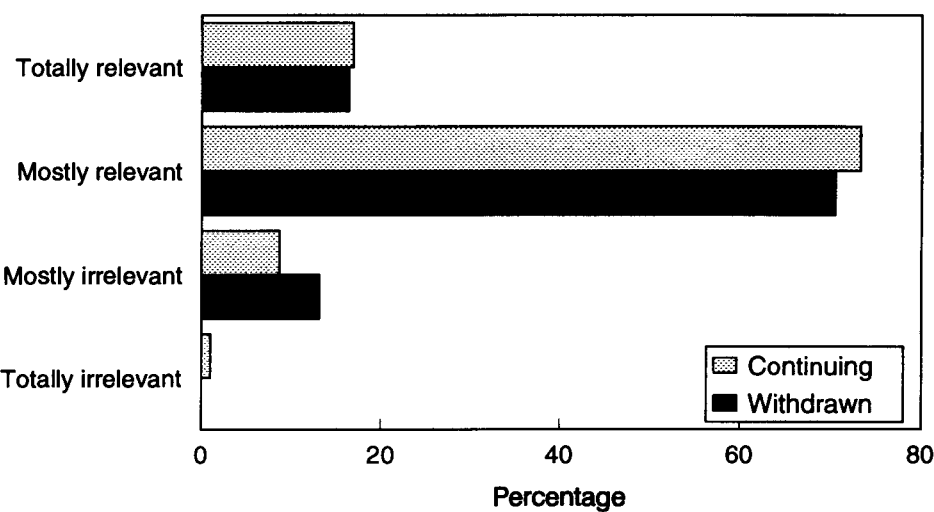
---

**Figure 4.6**  
**Ranking of encountered difficulties of studying externally**

---

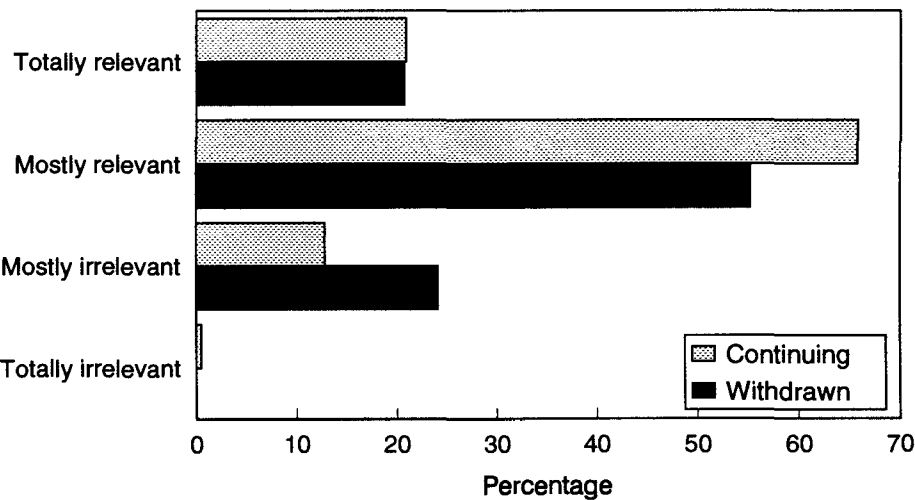
**Relevancy of Unit Materials to Professional Needs**

The perceived applicability of unit materials to professional needs is shown in Figure 4.7. At the beginning of semester most students perceived the unit materials would be relevant to their professional needs (totally relevant - continuing, 16.9%; withdrawn, 16.4%; mostly relevant - continuing, 73.3%; withdrawn, 70.5%).



**Figure 4.7**  
**Perceived applicability of unit materials to professional needs**

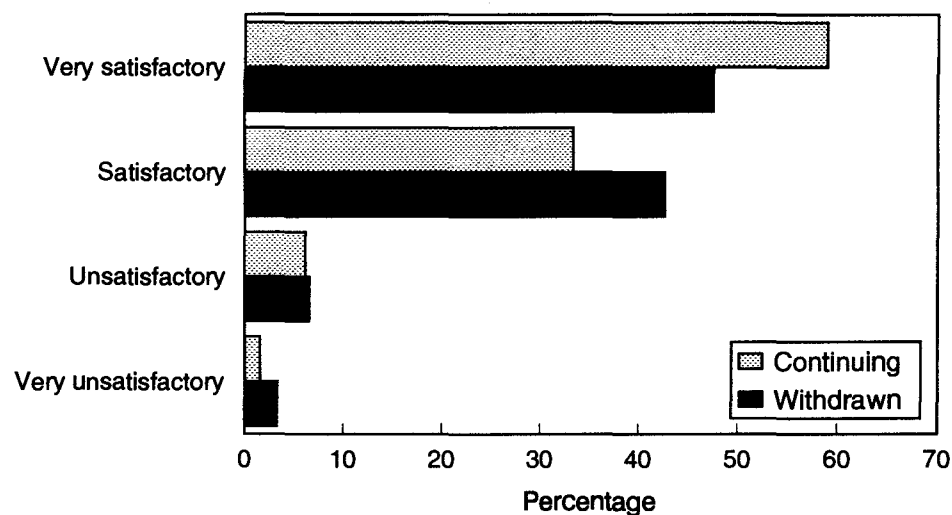
The encountered applicability of unit materials to professional needs is shown in Figure 4.8. Towards the end of semester a similar proportion of students rated the unit materials as relevant to their professional needs (totally relevant - continuing, 20.9%; withdrawn, 20.7%; mostly relevant - continuing, 68.5%; withdrawn, 55.2%). There was no significant difference ( $\chi^2 = 4.16$ ,  $df = 2$ ,  $p = 0.12$ , collapsed mostly irrelevant and totally irrelevant into one group to achieve minimum cell frequency sizes) between continuing and withdrawn students at the end of semester for their assessment of the applicability of unit materials to their professional needs, however, it was noted that withdrawn students saw the materials as generally less relevant to professional needs than continuing students.



**Figure 4.8**  
**Encountered applicability of unit materials to professional needs**

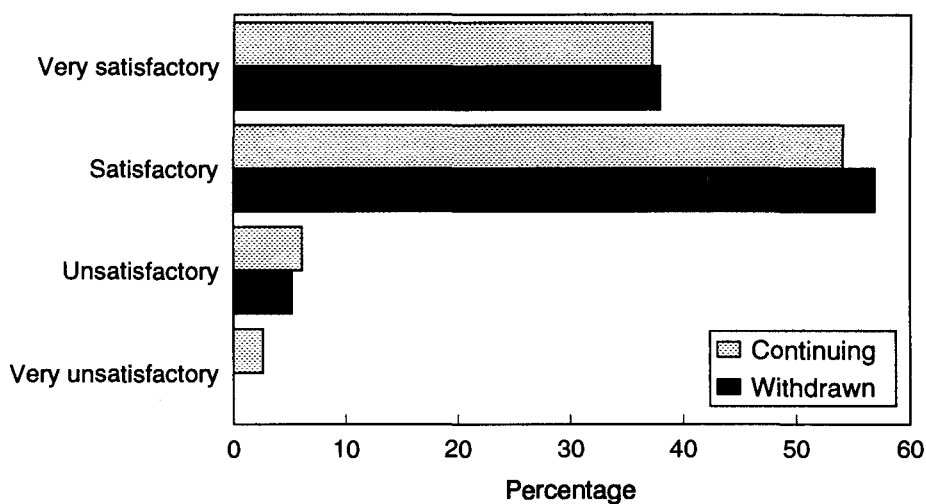
**Course Administration**

Figure 4.9 indicates that most students rated the administration of their enrolment procedure by External Studies as satisfactory or better (very satisfactory - continuing, 59.0%; withdrawn, 47.6%: satisfactory - continuing, 33.3%; withdrawn, 42.6%). There was no significant difference between continuing and withdrawn students for their rating of the level of satisfaction with the enrolment procedure by External Studies ( $\chi^2 = 2.47$ ,  $df = 2$ ,  $p = 0.29$ , collapsed unsatisfactory and very unsatisfactory into one group to achieve minimum cell frequency sizes).



**Figure 4.9**  
**Level of satisfaction with External Studies for enrolment procedure**

Figure 4.10 indicates the students' levels of satisfaction with communication with External Studies for administration issues during the semester is similar to that for enrolment procedure shown in Figure 4.9 (very satisfactory - continuing, 37.2%; withdrawn, 37.9%; satisfactory - continuing, 54.1%; withdrawn, 56.9%). Fewer students rated their level of satisfaction with External Studies administration as very satisfactory at the end of semester (37.4%) compared with their rating at the beginning of semester (56.3%). There was no significant difference between continuing and withdrawn students for their rating of the level of satisfaction with communication with External Studies for administration issues ( $\chi^2 = 0.77$ ,  $df = 2$ ,  $p = 0.68$ , collapsed unsatisfactory and very unsatisfactory into one group to achieve minimum cell frequency sizes).



**Figure 4.10**  
**Level of satisfaction with communication with External Studies for administration issues**

## **Aspects of Life Adversely Influencing Studies**

Perceptions of aspects of life that adversely affected studies before the semester commenced are compared in Table 4.3 to the students' perceptions towards the end of semester. At the beginning of semester, over one third of continuing and withdrawn students perceived that their studies would be adversely affected by "social", "personal", "family" and "work related" factors. There was no significant difference between continuing and withdrawn students at the beginning of semester for any of the aspects of their life adversely influencing studies that are listed in Table 4.3. A variation on this pattern emerged by the end of semester. There was a significant difference between continuing and withdrawn students on how "personal" factors had influenced their studies. "Personal" factors rated higher for withdrawn students as having a more adverse affect on their study progress.

**Table 4.3**

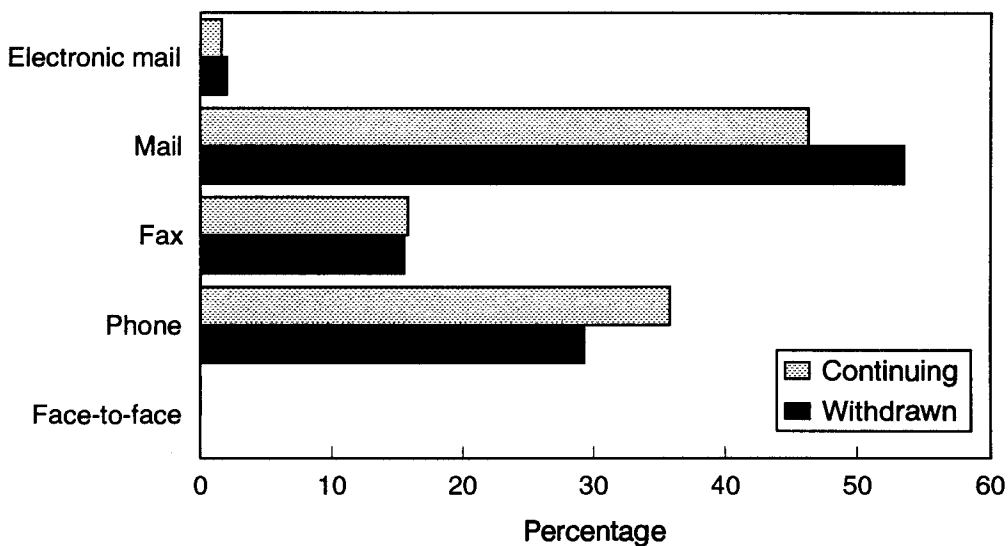
**Aspects of life that adversely affected studies: A comparison of perceptions before semester commenced compared to perceptions towards the end of semester for continuing and withdrawn students. Values are expressed as percentages.**

<b>Beginning of semester Aspect</b>	<b>Yes</b>	<b>Continuing May be</b>	<b>No</b>	<b>Yes</b>	<b>Withdrawn May be</b>	<b>No</b>	<b><math>\chi^2</math>, df, p</b>
Reduced social life	37.5	25.5	37.0	43.3	26.7	30.0	1.05, 2, 0.59
Personal	38.1	36.0	22.8	42.6	32.8	23.0	0.37, 2, 0.83
Family	48.7	23.9	25.4	44.3	29.5	24.6	0.80, 2, 0.67
Work	51.3	28.4	19.3	47.5	23.0	29.5	2.86, 2, 0.24
Ill health	6.6	24.9	64.5	6.6	31.1	59.0	
Financial	14.7	17.8	62.9	11.5	18.0	65.6	0.40, 2, 0.82
Other	6.6	1.5	9.6	8.2	88.5	3.3	
<b>End of semester Aspect</b>	<b>Yes</b>	<b>Continuing May be</b>	<b>No</b>	<b>Yes</b>	<b>Withdrawn May be</b>	<b>No</b>	<b><math>\chi^2</math>, df, p</b>
Reduced social life	38.6	14.7	35.0	31.1	13.1	31.1	0.08, 2, 0.96
Personal	43.1	11.2	34.0	44.3	19.7	18.0	6.54, 2, 0.04
Family	48.2	10.2	32.0	37.7	9.8	27.9	0.21, 2, 0.90
Work	54.3	9.6	28.9	75.4	3.3	11.5	
Ill health	21.8	9.1	55.3	24.6	6.6	42.6	
Financial	13.7	6.6	60.9	11.5	8.2	47.5	
Other	10.7	73.6	15.7	14.8	73.8	11.5	1.25, 1, 0.26

Chi-square values calculated from raw scores; where percentages do not total 100%, the difference corresponds to missing values. Chi-square values were not calculated when cell sizes were less than five.

**Methods of Communication with External Studies**

Figure 4.11 indicates the main methods of communication by students with External Studies were the telephone (continuing, 35.8%; withdrawn, 29.3%) and the postal system (continuing, 46.3%; withdrawn, 53.5%). There appears to be no difference between continuing and withdrawn students in their main methods of communication with External Studies, although it was not possible to test this statistically due to small cell frequencies (Blackmore, 1994). Very few students used electronic mail (continuing, 1.6%; withdrawn, 2.0%) or face-to-face contact (continuing, 0.5%; withdrawn, 0.0%) as a means of communication with External Studies.

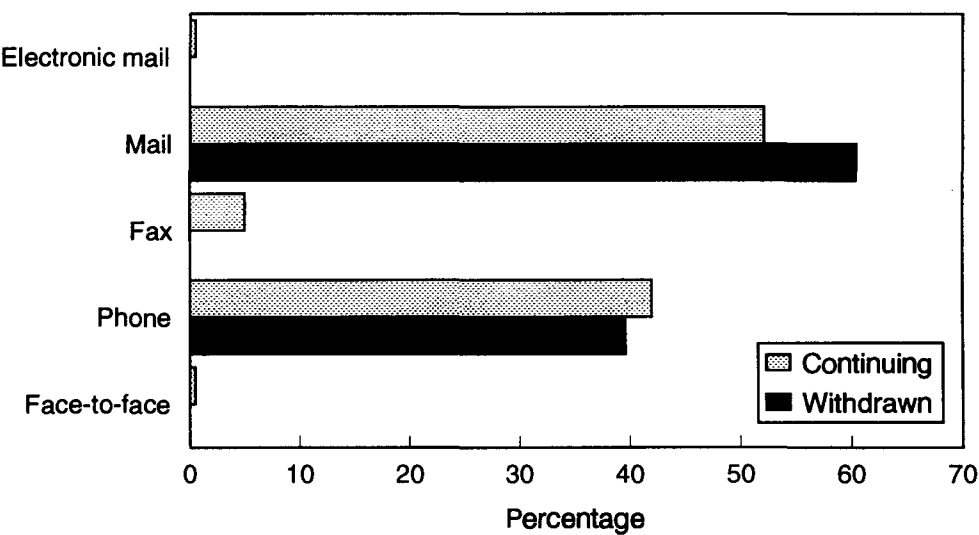


**Figure 4.11**  
**Main method of communication with External Studies**



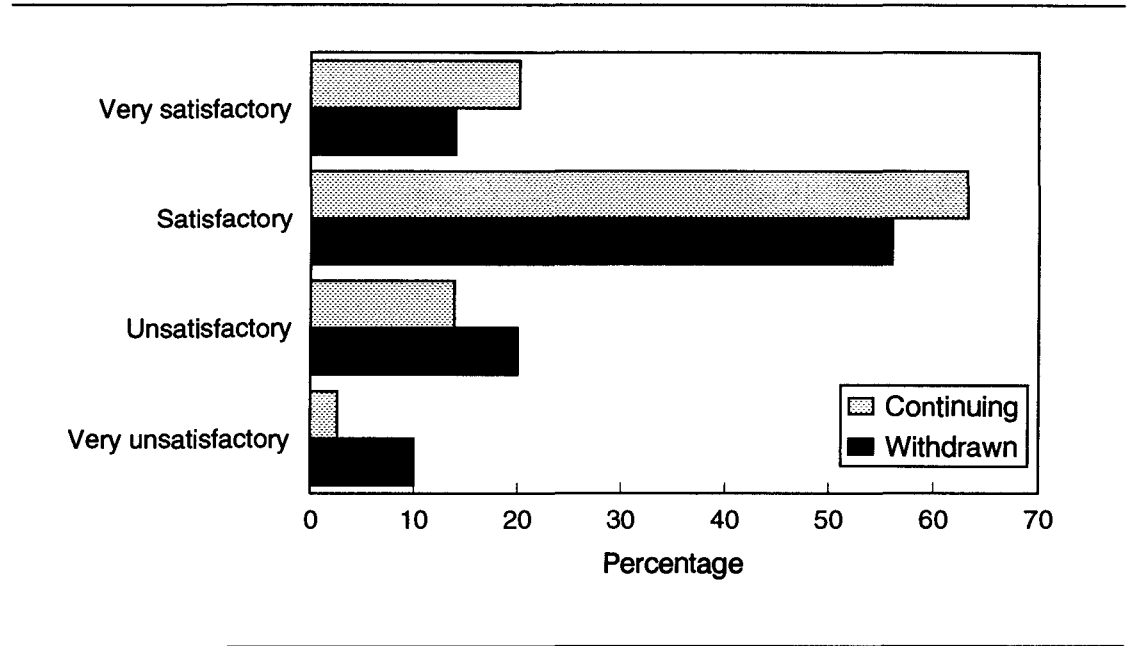
**Communication with Tutor**

Figure 4.12 indicates the main methods of communication by students with their tutor were the telephone (continuing, 42.0%; withdrawn, 39.6%) and the postal system (continuing, 52.1%; withdrawn, 60.4%). There appears to be no difference between continuing and withdrawn students in their main methods of communication with the tutor, although it was not possible to test this statistically due to small cell frequencies (Blackmore, 1994). Very few students used electronic mail (continuing, 0.05%; withdrawn, 0.0%) or face-to-face contact (continuing, 0.05%; withdrawn, 0.0%) as a means of communication with their tutor.



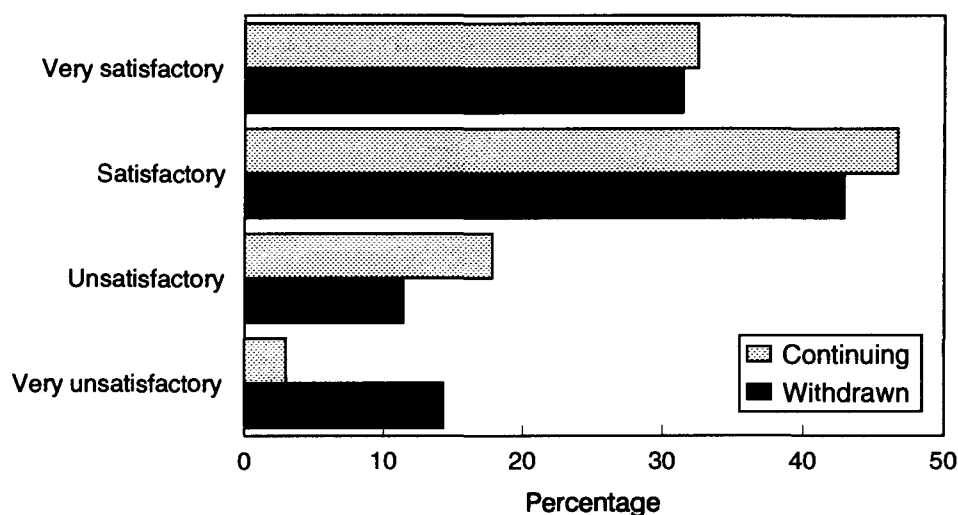
**Figure 4.12**  
**Main method of communication with tutor**

Figure 4.13 indicates most students considered their communication with the tutor to be at least satisfactory (continuing, 83.4%; withdrawn, 70.0%). However, there was a significant difference ( $\chi^2 = 7.38$ ,  $df = 3$ ,  $p = 0.06$ ) between continuing and withdrawn students for the rating of communication with the tutor. Withdrawn students were less satisfied with the communication between themselves and their tutor.



**Figure 4.13**  
**Level of satisfaction with communication with tutor**

Figure 4.14 indicates most students considered the tutor’s comments about their assignments to be satisfactory or very satisfactory (continuing, 79.2%; withdrawn, 74.3%). However, there was a significant difference [ $\chi^2 = 8.73$ ,  $df = 3$ ,  $p = 0.03$ ; one cell had an expected frequency below 5 but less than 20% of the expected frequencies were less than 5, Cochran (1954)] between continuing and withdrawn students for the rating of comments tutors made about their assignments. Withdrawn students were less satisfied with the comments made by the tutor about their assignments.



**Figure 4.14**  
**Level of satisfaction with assignment feedback**

## Relationship of Variables Known at the Beginning of Semester and Student

### Withdrawal from Units

A discriminant analysis using the variables listed in Table 4.4 correctly classified 69.35% of students according to whether they continued or withdrew from their studies. "Stage in the course" was correlated highest with the canonical discriminant function that separated continuing and withdrawn students.

**Table 4.4**

**Discriminant analysis to determine the variables known at the commencement of the unit that are associated with withdrawal**

Variables	SCDFC*	CORR**
Age	-0.109	0.134
Gender	-0.121	-0.122
Geographic location	-0.177	-0.072
Stage in course	0.823	0.667
Course average	0.386	0.574
N° of semesters satisfactorily completed	-0.282	0.490
N° of previous withdrawals	-0.282	-0.114
N° of years since completion of last teaching qualification	0.084	0.274
N° of years teaching experience	0.420	0.462
Chosen mode of study	0.082	0.180
Perceived relevancy of unit materials	-0.107	-0.103
Level of satisfaction with external studies administration	-0.294	-0.271

\* Standardised canonical discriminant function coefficients

\*\* Pooled within-groups correlations between discriminating variables and canonical discriminant functions

69.35% of students correctively classified, Eigenvalue = 0.105, Wilks' Lambda score = 0.904,  $\chi^2 = 24.06$ ,  $df = 12$ ,  $p < 0.001$ .

A stepwise discriminant analysis (SPSS) indicated that "stage in the course" was the variable that explained most of the variance; it correctly classified 59.3% of students according to whether they were continuing or withdrawn. When the variable "stage in the course" was combined with "number of years of teaching experience" the

discriminant analysis correctly classified 63.3% of the total students into whether they withdrew or continued in their units.

**Relationship of Variables Known at the End of Semester and Student Progress**

A discriminant analysis using the variables listed in Table 4.5 correctly classified 74.44% of students according to whether they continued or withdrew from their studies. The variable “level of satisfaction with communication with tutor” was the factor identified in a stepwise discriminant analysis to account for most of the separation between the two groups and correctly classified 72.43% of the total students into whether they withdrew or continued with their studies.

**Table 4.5**  
**Discriminant analysis to determine the variables known at the completion of the unit that are associated with withdrawal**

Variables	SCDFC*	CORR**
Relevancy of unit materials	-0.062	0.26
Level of satisfaction with communication with tutor	1.005	0.99
Level of satisfaction with assignment feedback from tutor	-0.007	0.57
Level of satisfaction with communication with External Studies for administration issues	0.115	0.19

\* Standardised canonical discriminant function coefficients  
\*\* Pooled within-groups correlations between discriminating variables and canonical discriminant functions  
74.44% of students correctively classified, Eigenvalue = 0.023, Wilks' Lambda score = 0.977,  $\chi^2 = 5.03$ ,  $df = 4$ ,  $p = 0.28$ .

## **THE DESP INVENTORY**

The DESP inventory is made up of 72 questions (Appendix F). The sub-scales deep approach (DA), intrinsic motivation (IM), extrinsic motivation (EM) and surface approach (SA) have been adapted from the Approaches to Studying Inventory (ASI) (Entwistle and Ramsden, 1983).

### **First Order-Factor Analysis**

Forty six items from Kember's (1995) DESP inventory (i.e., the 72 questions minus the 26 ASI questions) were submitted to a factor analysis using principal component analysis. Fifteen factors had an eigenvalue greater than 1.0, although a scree test (Tabachnick and Fidell, 1989) indicated that only five factors were important. These 15 factors accounted for 66.1% of total variance (the first five factors accounted for 35.8% of total variance). The items with a factor loading of greater than 0.3 are shown in Table 4.6. A discriminant analysis of these 15 factors correctly classified 73.2% of withdrawing and continuing students; the first four factors (from a stepwise discriminant analysis) correctly predicted 64.2% of withdrawing and continuing students.

**Table 4.6**  
**Factor analysis to produce sub-scales in the DESP Inventory**

Question number	F 1	F 2	F 3	F 4	F 5	F 6	F 7	F 8	F 9	F 10	F 11	F 12	F 13	F 14	F 15	Communality
50	-415				413											683
51	532			310	-384											662
52	-372															391
53	342														-303	636
54	420												339			667
55		374	372	326		-323										738
56	371															610
57			-315			345	-307							363		642
58	388											411				565
59	336		492	378												712
60				404		300										510
61			430													700
62		571		396		-334										747
63	534			-321												630
64	340										336					524
65	555					358										763
66			-460	307												620
67			376		308							382				772
68					-572	308										631
69		428	-346					-336		340						744
70		313	-301				522									708
71	594															799
72	536															617
73	-418	340														594
74	-357				384											553
75		405					476									690
76	377		365													486
77		572							348							699
78	596	396														714
79	485										-357				324	799
80				302					473	-539						728
81			-415						-382			301				726

82	349				356					-340					610
83	529														672
84						499							-324		629
85	477		313	-343							-345				779
86		611													649
87								-342							489
88			458								455				653
89					-583	353									749
90		556				-339									671
91	398		-310						310	401					720
92	339							397					-342	369	757
93													-363		573
94	353	388	-424												641
95								-431			335			341	766
Eigenvalue	5.43	3.42	2.95	2.41	2.22	1.88	1.64	1.51	1.44	1.41	1.38	1.32	1.22	1.12	1.03
% variance	11.8	7.4	6.4	5.2	4.8	4.1	3.6	3.3	3.1	3.1	3.0	2.9	2.7	2.4	2.2
Only factor loadings greater than 0.30 are reported															
Decimal points have been omitted in the factor loadings and communality															



**Table 4.7**  
**Factorial structure of second-order analysis of each sub-scale**

Sub-scales	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Communality
Factor 1	-613	506						757
Factor 2		-420		654	-324			777
Factor 3	557		482		463			845
Factor 4		-525		563				695
Factor 5		-498			333	-333		606
Factor 6		697						561
Factor 7					-434		588	697
Factor 8	-378		713	-428				880
Factor 9	448				424		446	746
Factor 10			393				-315	402
Factor 11	352				311	415		518
Factor 12		480		402				503
Factor 13	428					411	325	549
Factor 14	-380		778					855
Factor 15		351		535		-467		678
Deep approach	559	328						590
Surface approach	-460				443	367		614
Intrinsic motivation	682				-401			685
Achievement motivation	-637						307	573
Eigenvalue	3.02	2.22	1.97	1.71	1.45	1.11	1.05	
Percentage of variance	15.9	11.7	10.4	9.0	7.7	5.8	5.5	

Only factor loadings greater than 0.30 are reported  
Decimal points have been omitted in the factor loadings and communality

## Second Order-Factor Analysis

The second-order factor analysis on the 15 sub-scales identified in the first-order factor analysis and the four sub-scales from the ASI ('surface approach', 'deep approach', 'extrinsic motivation' and 'achievement motivation') produced seven factors with eigenvalues greater than 1.0 (Table 4.7). A scree test (Tabachnick and Fidell, 1989) indicated that the first six factors are important. The four ASI sub-scales when submitted to a discriminant analysis correctly classified 56.1% of withdrawing and continuing students.

**Table 4.8**  
**Discriminant analysis of the 15 sub-scales**  
**for withdrawal based on the DESP inventory**

Sub-scales	SCDFC*	CORR**
Factor 1	0.654	0.409
Factor 2	-0.213	0.086
Factor 3	0.028	0.303
Factor 4	0.502	0.212
Factor 5	0.046	-0.051
Factor 6	-0.086	0.104
Factor 7	0.182	-0.017
Factor 8	0.597	-0.088
Factor 9	0.511	0.439
Factor 10	-0.257	-0.204
Factor 11	0.151	0.047
Factor 12	0.071	0.271
Factor 13	-0.276	-0.142
Factor 14	-0.728	-0.023
Factor 15	0.735	0.487

\* Standardised canonical discriminant function coefficients

\*\* Pooled within-groups correlations between discriminating variables and canonical discriminant functions

73.2% of students correctively classified, eigenvalue = 0.230, Wilks' Lambda score = 0.813,  $\chi^2 = 46.69$ ,  $df = 15$ ,  $p < 0.01$ .

The 19 sub-scales (15 from the first-order factor analysis and 4 from ASI) accounted for 66% of total variance. When the four ASI sub-scales were deleted from the second-order factor analysis the remaining 15 factors accounted for 67% of total

variance. The sub-scale 'factor 15' (Table 4.8) had the highest correlation with the canonical discriminant function and accounted for 59.5% of total variance. The 15 factors correctly classified 73.2% of withdrawn and persisting students (Table 4.8).

### **Discriminant Analysis using Kember's (1995) Sub-scales and Scales**

A discriminant analysis using the 15 DESP inventory sub-scales identified by Kember (1995), correctly classified 67.54% of students according to whether they continued or withdrew from their studies (Table 4.9).

**Table 4.9**  
**Discriminant analysis of Kember's (1995) sub-scales for withdrawal based on the DESP inventory**

<b>Sub-scales</b>	<b>SCDFC*</b>	<b>CORR**</b>
Enrolment encouragement	0.204	0.204
Study encouragement	-0.081	-0.063
Family support	0.151	0.110
Positive impression of the course	-0.378	-0.349
Positive telephone counselling	0.120	0.049
Reading habit	-0.020	0.036
Insufficient time	0.449	0.558
Events hinder study	0.244	0.541
Distractions	-0.416	-0.077
Potential drop-out	0.536	0.503
Negative impression of the course	-0.014	0.403
Deep approach	-0.139	0.087
Intrinsic motivation	0.460	0.104
Extrinsic motivation	0.376	0.233
Surface approach	-0.256	0.009

\* Standardised canonical discriminant function coefficients

\*\* Pooled within-groups correlations between discriminating variables and canonical discriminant functions

67.54% of students correctively classified, eigenvalue = 0.135, Wilks' Lambda score = 0.881,  $\chi^2 = 27.67$ ,  $df = 15$ ,  $p = 0.02$ .

The sub-scale "insufficient time" had the highest correlation with the canonical discriminant function that separated continuing and withdrawn students (Table 4.9).

Table 4.10 indicates "insufficient time" ( $r = 0.20$ ,  $p < 0.01$ ), "events hinder study" ( $r = 0.18$ ,  $p < 0.01$ ), "potential drop-out" ( $r = 0.17$ ,  $p < 0.01$ ) and "negative impression of the

course" ( $r = 0.16$ ,  $p < 0.01$ ) were significantly and positively correlated with student withdrawal. Kember's (1992) "external attribution" scale was the only scale to be positively correlated withdrawal (Table 4.10).

**Table 4.10**  
**Correlation of scales and sub-scales of the DESP inventory with withdrawal rates**

<b>Sub-scales</b>	<b><i>r</i></b>	<b><i>p</i></b>
Enrolment encouragement	0.07	0.24
Study encouragement	0.01	0.91
Family support	0.06	0.38
Positive impression of the course	-0.12	0.07
Positive telephone counselling	0.01	0.91
Reading habit	0.01	0.93
Insufficient time	0.20	0.01
Events hinder study	0.18	0.01
Distractions	0.01	0.98
Potential drop-out	0.17	0.01
Negative impression of the course	0.16	0.01
Deep approach	0.02	0.75
Intrinsic motivation	0.02	0.77
Extrinsic motivation	0.07	0.24
Surface approach	0.01	0.86
<b>Scales</b>		
Social integration	0.06	0.33
External attribution	0.18	0.01
Academic integration	-0.02	0.73
Academic incompatibility	0.13	0.05

The results of a factor analysis of the 15 sub-scales identified by Kember (1995), as shown in Table 4.11, produced a first factor that accounted for 23.1%, a second factor that accounted for 13.1%, a third factor that accounted for 11.5%, a fourth factor that accounted for 8.0% and a fifth factor that accounted for 6.7% of total variance.

**Table 4.11**  
**Second order factor analysis of Kember's (1992) 15 sub-scales**

<b>Sub-scales</b>	<b>Factors</b>				
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Intrinsic motivation	- 66				
Negative impression of the course	63				
Surface approach	59				
Insufficient time	58		53		
Extrinsic motivation	56				
Distractions	56				
Potential drop-out	55				
Reading habit	- 53		44		
Positive impression of the course	- 51				51
Deep approach	- 44	- 43	46		
Study encouragement		76			
Enrolment encouragement		67			
Events hinder study			67		
Positive telephone counselling				60	
Family support				- 59	47
Eigenvalue	3.5	2.0	1.7	1.2	1.0
Percentage of variance explained	23.1	13.1	11.5	8.0	6.7

Decimal points before the factor loadings have been omitted and only loadings greater than 0.4 are shown in this Table.

The subsequent chapter considers the above results in the context of the available literature. The two research questions are answered and a number of recommendations are made to enhance the progress of external students enrolled in the Fourth Year of the Bachelor of Education course.

## **CHAPTER 5. DISCUSSION**

The extent to which a range of variables related to attrition and persistence of external students enrolled in the Fourth Year of the Bachelor of Education course were investigated in this study. Responses to two self-administered mail out questionnaires were used to collect information about the students' perceptions and experiences of studying externally during second semester, 1995. Responses to the two questionnaires and the additional data obtained from the student records held by the university enabled a profile of these students to be constructed. The inclusion of the DESP inventory (Kember, 1995) with the second questionnaire provided substantial additional information that enabled comparisons to be made with the variables Kember (1995) found to be associated with student progress in distance education.

The overall response rate for the study was 51.2% (59.2% for the first questionnaire). This response rate was considered good for a mail out questionnaire, particularly as students were required to complete two separate questionnaires, and sufficient for the sample to be seen as representative of the study population. The response rates for other studies seeking similar information from students vary considerably [ECU student progress survey (1995), 30%; Kember et al. (1994), 51%; Kember (1992), 61%; Price et al. (1991), 22-24%;].

For the purpose of the analysis it was assumed that the sample was representative of the population. Respondents who did not return the consent form nor the questionnaires were excluded from the analysis. As a consequence, there may be some bias in inferences drawn from the results. This problem was unavoidable as participation in the study was voluntary and readers should take this into account when considering the implications of this study.

## PROFILE

Although other researchers indicate student background characteristics (e.g., age, sex, geographic location, educational qualifications) are not good predictors of attrition, their indirect influence on other variables associated with studying externally has provided some useful information on student persistence in distance education (Woodley and Parlett, 1983; Billings, 1988; Kember, 1989). Demographic information was regarded as being more useful in identifying at-risk students than implying some cause-and-effect relationship with outcomes (Kember, 1995). Students with adverse demographic characteristics have more difficulty integrating the demands of being an external student with their existing lifestyle. For these reasons information was sought to enable a profile of students in the study to be constructed.

The students enrolled in the Fourth Year of the Bachelor of Education who agreed to participate in the study were predominantly female (84.5%), in their early thirties ( $32.7 \pm 0.52$  years), living in Western Australia (75.9%), having completed their initial teaching qualification 8.8 ( $\pm 0.41$ ) years ago and have subsequently had 6.4 ( $\pm 0.34$ ) years teaching experience. They were mostly classroom teachers (66%) who were studying part-time, were less than half way through the course ( $3.7 \pm 0.14$  units completed; 8 units to complete the course), had not previously withdrawn from a unit ( $0.7 \pm 0.09$  unit withdrawals) and were achieving satisfactory results (mean course average  $63.6 \pm 1.14\%$ ).

The variables "age" ( $t = 0.23$ ,  $df = 256$ ,  $p = 0.82$ ), "gender" ( $\chi^2 = 0.35$ ,  $df = 1$ ,  $p = 0.56$ ), "geographic location" ( $\chi^2 = 0.33$ ,  $df = 2$ ,  $p = 0.85$ ), "number of years since completing most recent teaching qualification" ( $t = 1.40$ ,  $df = 253$ ,  $p = 0.16$ ), "mode of study" ( $\chi^2 = 1.25$ ,  $df = 1$ ,  $p = 0.27$ ) and "number of previous withdrawals" ( $t = 0.48$ ,  $df = 256$ ,  $p = 0.63$ ) were not significant discriminators between withdrawing and continuing students (see Table 4.1, Figures 4.1 and 4.2). However, continuing and withdrawn students did vary significantly in their "number of years of teaching experience" ( $t =$

2.43,  $df = 254$ ,  $p = 0.02$ ), "stage in the course" ( $t = 3.21$ ,  $df = 256$ ,  $p < 0.01$ ), "course average" ( $t = 2.55$ ,  $df = 256$ ,  $p = 0.01$ ) and "number of semesters successfully completed in the course" ( $t = 2.22$ ,  $df = 256$ ,  $p = 0.03$ ). The withdrawn students had less teaching experience [5.0 ( $\pm 0.56$ ) years compared with 6.9 ( $\pm 0.41$ ) years for continuing students], had satisfactorily completed fewer units [2.9 ( $\pm 0.29$ ) units completed compared with 4.0 ( $\pm 0.16$ ) units completed for continuing students], had studied externally for fewer semesters [2.4 ( $\pm 0.24$ ) compared with 3.0 ( $\pm 0.14$ )], and had lower course averages [58.4 ( $\pm 3.03$ )% compared with 65.2 ( $\pm 1.15$ )%] than the continuing students. Information related to student characteristics and academic background that were known at the commencement of semester (e.g., age, gender, stage in the course), collectively, correctly classified 69.4% of students according to whether they continued or withdrew (Table 4.4). The variable "stage in the course" correctly classified 59.3% of the students and correlated most highly with the canonical discriminant function that separated continuing and withdrawn students. "Years of teaching experience" correctly classified an additional 4% (second variable entered into the discriminant analysis), taking the total number of students correctly classified according to whether they continued or withdrew to 63.3%. The more units a student has completed the less likely that student is to withdraw. These results were not unexpected as those students less suited to external study were more likely to drop-out during the early stages of the course, and those students persisting were expected to have an increasing commitment to completing the award with the satisfactory completion of each unit. Roberts (1984) reports that external students were more likely to withdraw during the first semester or early part of the course, a finding that concurs with the results from this study. He goes on to emphasise the importance of effective pre-enrolment counselling, efficient student support services and high quality unit materials if early student drop-out rates are to be reduced.



The variable “course average” was also strongly, positively correlated with the canonical discriminant function that separated continuing and withdrawn students and, as expected, withdrawn students had a lower course average than continuing students. Kember et al. (1994) suggest that student results (GPA) function as an intervening variable, with some students who receive low grades being discouraged from continuing with their studies.

The results of this study suggest that the most at-risk students were those commencing the Fourth Year of the Bachelor of Education course in their first or second year of teaching. A number of student comments supported this finding. For example, “I started teaching for the first time this year after completing a Bachelor of Arts (Education) last year. The demands of the job made it impossible for me to find the time required to complete the course successfully” and “I have been appointed a teaching job at .... school and feel that I cannot cope with studying during my first semester of teaching. I will complete my Bachelor of Education when I have settled into my new career and do not have so much work to do”.

These findings have substantial implications for both the university administration and teaching departments in the early identification of at-risk students. Senior staff in External Studies and tutors need to be advised that the more at-risk students in the Fourth Year of the Bachelor of Education course are those in the earlier stages of the award, who are achieving comparatively lower grades and who have not been working in schools for as long as other students. Particular attention by the university to the needs and problems of these students during the early part of the semester may reduce the number of student withdrawals. Attrition rates may be reduced by providing additional support to these students, particularly in the first few weeks of semester. Knowing a student fits into the at-risk category should not necessarily exclude them from a place in the course as there are a multiplicity of factors influencing a student's decision to withdraw (Kember, 1995). However, with the appropriate advice at the

admissions stage and some modification of university procedures, these at-risk students may overcome adverse characteristics or circumstances. For example, tutor-initiated contact with students early in the semester (e.g., an introductory letter or phone call), may make all the difference to some students that are feeling unsure about how to tackle an assignment, whether the work load is too heavy, or where to locate resources.

*It is therefore recommended that External Studies staff and tutors be advised that the at-risk students in the Fourth Year of the Bachelor of Education award are those in the early stage of the course, with limited teaching experience and lower unit grades. Special support provisions need to be focussed on these students.*

The geographic location of study participants (Western Australian metropolitan 33.7%, Western Australian country 42.2%, interstate 24.0%) indicated there were a higher percentage of Western Australians living in country areas who were studying externally compared with the general population of external students at the university (approximately evenly distributed between the three geographic locations).

The Fourth Year of the Bachelor of Education course represents an additional year of teacher education for all students. Given that the course is an extension of the students' initial teaching qualifications, it is not surprising that a large proportion of the study participants (84.5%) were classroom teachers, senior teachers, deputy principals or principals. Of the remainder, some students indicated they were combining relief teaching with home duties and study commitments, and only two advised they were employed in a profession other than education. The due dates for the submission of assignments and the timing of examinations should, therefore, be adjusted to accommodate peak work times in schools to ease the pressure on these students. The need for greater flexibility in the teaching and assessment of units in the Fourth Year of the Bachelor of Education course is discussed in greater detail later in this chapter.

Students indicated "increased employment opportunities" and "career advancement" were the most important benefits that they expected to gain from

completing the course (Figure 4.4). There was no appreciable difference between continuing and withdrawn students in the ranking of these perceived benefits.

## **WITHDRAWAL**

### **Timing of Withdrawal**

Just under one quarter (23.4%) of all students in this study withdrew from at least one unit in which they were enrolled between the end of week 2 and the end of week 10. In comparison, the turnstile percentage of withdrawals to March 31 for external students generally at the university varied between 16.5% and 23.0% over the last four years (Table 1.1). The corresponding rates for external students enrolled in the Fourth Year of the Bachelor of Education course have ranged between 19.5% and 21.7% over this same period.

The majority of withdrawals (85.2%) occurred before the end of week 5 of second semester (Figure 4.3). This timing coincided with the last date for withdrawal without financial penalty (31 August), a date that is set by government regulation. All students in the study were either Australian citizens or held permanent residency status and were therefore required to contribute to the cost of their tertiary education through the HECS. Under the HECS, students are given about five weeks from the beginning of each semester to decide if they wish to continue with their studies before being committed to paying the HECS fee. Information provided to students at the time of enrolment, and details on their enrolment particulars forms and HECS assessment advice notices emphasise the last date for withdrawal without financial penalty. Therefore, the large proportion of students that withdrew prior to the HECS assessment date was not surprising.

The university also enables students to withdraw prior to 6 October (about the end of week 10) without incurring an academic penalty. That is, a “withdrawn” result is entered on the academic transcript for students who withdraw prior to the last date for

withdrawal without academic penalty. Students who withdraw after that date receive a “fail” grade which then has the effect of dramatically lowering their course average and may result in them being excluded from the course. In the current study eight students (13.1%) withdrew after the HECS assessment date and before the last date for withdrawal without academic penalty, and only one student (1.6%) withdrew after the last date for withdrawal without academic penalty (Figure 4.3).

### **Reasons for Withdrawal**

Numerous studies have been conducted to investigate the reasons for withdrawal in distance education courses (Kennedy and Powell, 1976; Roberts, 1984; Thompson, 1984; Sweet, 1986; Billings, 1988; Kember, 1989; Kember et al., 1992). Building on previous research and the work of others in the field of drop-out in higher education (Spady, 1970; Tinto, 1975; Pascarella, 1980; and Bean and Metzner, 1985), Kember (1995) adapted Tinto’s model (1975) to include variables associated with the students’ social, home and work environments, and the degree to which distance education students were able to integrate the demands of their studies with those of family, friends and work colleagues. The study currently being reported, like other recent studies into failure and drop-out (Kember et al., 1990, 1991, 1992 and 1994; Price et al., 1991), has been used more as a means of investigating student progress than being limited to an explanation of attrition.

The conceptual framework for the study of variables related to attrition in the Fourth Year of the Bachelor of Education course was largely based on Kember’s (1995) revised model and list of variables associated with student progress in distance education. Kember (1995) acknowledges that variables which appear in one component of the model affect variables in succeeding components and that as a result of the interaction of these factors over a period of time the students make decisions regarding their academic progress.

The clear identification of reasons for withdrawal is an acknowledged problem in attrition research (Price et al., 1991). Furthermore, students are often reluctant to identify the real reason(s) for withdrawal, there may be multiple reasons for them discontinuing or the reason(s) given may not reflect the underlying difficulties a student is encountering (e.g., “returned to teaching” may be due to increased financial pressure). Some caution is therefore appropriate when considering responses to questions relating to “reasons for withdrawal” in this and other attrition studies.

In the current study an attempt was made to identify the reason(s) for withdrawal by administering the second questionnaire to withdrawing students as close to the time of their decision to drop-out as possible (i.e., along with their confirmation of withdrawal notice). Withdrawing students were asked to nominate their reason(s) for withdrawal and the responses were then categorised into six groups - "work", "family" and "study commitments", "insufficient time", "ill health" and "study load" (Table 4.2). Many students suggested there were multiple reasons for their withdrawal, a finding similar to that reported by Price et al. (1991), however, the majority of students indicated that work, family or study commitments were the main reasons for the withdrawal. Two typical student written responses to this question were “I just do not have the necessary hours in the day to teach full-time, run a house, three children, a husband and a dog as well as study and remain sane” and “family life and commitments were drastically affected - kids thought Mummy was always doing assignments - I was unable to do the things I wanted with and for the family”. Another student explained the decision to withdraw with the comment “increased demands at work, coupled with personal dramas made it difficult to allocate adequate time and concentration to study”.

A number of students' comments in response to the question relating to the reason(s) for withdrawal indicated that administration issues, such as the late receipt of unit materials and the lack of feedback from the tutor on their first assignment by the HECS assessment date, contributed to their decision to withdraw. For example,

“withdrawal mainly due to lack of organisation in personal life but compounded by unit material not forwarded until two weeks after semester commenced” and “if I had received my first failed assignment back before the HECS date I would have withdrawn before that date, therefore no charge”. For the university to reduce the rate of attrition early in the semester a number of procedures need to be improved (e.g., earlier mail out of study materials, allocation of tutors to units prior to the commencement of semester, introductory letter from the tutor).

*It is therefore recommended that External Studies staff mail unit materials by a date that ensures students receive them before the first day of semester, that tutors initiate contact with students in their class early in the semester and that the first assignment is returned to students prior to the HECS assessment date.*

## **DIFFICULTIES OF STUDYING EXTERNALLY**

There was no apparent difference between the rankings of perceived differences of studying externally for continuing and withdrawn students. When asked a similar question at the end of semester the rankings remained the same, although “organisation of work and personal commitments around your study” was less important for withdrawn students and “completing assignments on time” a slightly greater difficulty for both continuing and withdrawn students. These were not unexpected results as 93% of students had already completed at least one unit in the Fourth Year of the Bachelor of Education course and would have anticipated the difficulties associated with studying externally. Being prepared for these unexpected disruptions and inconveniences associated with studying externally is more likely to result in a behaviour pattern conducive to persistence (Kaplan and Fishbein, 1969).

“Financial difficulties” ranked lowest of the possible perceived and encountered difficulties, with withdrawn students ranking “financial difficulties” a little higher than continuing students (Figures 4.5 and 4.6). Given that the majority of the students were currently employed as teachers it was expected that “financial difficulties” would be ranked low in this range of alternatives. Being the fourth year of an undergraduate

course, the students had already completed three years of tertiary study and were not expected to have an appreciable difficulty understanding unit materials, a finding confirmed by the results (Figures 4.5 and 4.6).

The two difficulties associated with studying externally over which the university has considerable influence are “understanding unit materials” and “communicating with your tutor”. Other than “financial difficulties”, these two difficulties were ranked lowest by the students participating in the study (Figures 4.5 and 4.6).

The difficulties associated with combining study and work are more likely to result in higher withdrawal rates for external students (Kember et al., 1994; Price et al., 1991). Many students enrolled in the Fourth Year of the Bachelor of Education award were mature age students who were combining teaching with part-time study. Therefore, it was not surprising that a significantly higher proportion ( $\chi^2 = 29.20$ ,  $df = 4$ ,  $p = < 0.001$ ) of withdrawing students compared with continuing students agreed with the statement in the DESP inventory, “a change in my work left me without enough time for study”, when compared with continuing students. Greater flexibility by university administration may reduce some of the difficulties associated with “completing assignments on time”. For example, two students commented as follows “I found coping with the major assignment and studying for exams conflict with the heavy marking load (tests) and reports I had to write as a primary teacher” and “I moved from .... to .... about 4 weeks before test week, in a week where 2 major (final) assignments were due. This was very hectic, especially as my husband had moved 6 weeks prior and I had to organise our move. I then had to find a new job when I arrived in ..... and settle into a new lifestyle and town while studying in between”.

*It is therefore recommended that External Studies staff and tutors have a cognisance of the pressures on students enrolled externally in the Fourth Year of the Bachelor of Education course associated with the organisation of work and personal commitments to enable these students to continue in their studies, and where appropriate, be prepared to negotiate submission dates for assignments.*

Although there was no apparent difference between the ratings of “envisaged aspects of life that would adversely affect studies” for continuing and withdrawn students (Table 4.3), when asked a similar question at the end of semester there was a significant difference between the ratings for continuing and withdrawn students for “personal” factors. “Personal” factors had a more pronounced affect on the studies of withdrawn students than on continuing students. Seventy five percent of withdrawn students indicated that “work” had an adverse affect on academic progress. This result was a 28% increase on the response from those students at the beginning of semester that envisaged “work related” factors would adversely affect their studies that semester. These findings indicate a need for the university administration to be flexible in the structuring of courses and the timing of units offered. For example, as most of the students in the study were teachers, university examinations conflicted with the writing of school reports and other major administration tasks required to be completed at the end of the school semester. Units in the Fourth Year of the Bachelor of Education award may, therefore, be more appropriately offered during school vacation periods or there may be a need for more continuous assessment in the course.

*It is therefore recommended that the university, in addition to offering the Fourth Year of the Bachelor of Education course during the traditional semester period, provide students with the opportunity to complete units in this award during the primary and secondary school vacation times.*

There was a three fold increase in the percentage for both continuing (6.6% to 21.8%) and withdrawn (6.6% to 24.6%) students between the beginning and end of semester who indicated that “ill health” had adversely affected their academic progress. Students generally have limited control over the state of their health and the university administration may wish to take this into consideration when establishing procedures relating to student progress. The provision for additional time to complete assignments and the eligibility for deferred examinations are two examples of where allowances are made on medical grounds.



## **APPLICABILITY OF UNIT MATERIALS**

Although most students reported the unit materials to be relevant to professional needs (Figures 4.7 and 4.8), more students saw them as irrelevant to professional needs having nearly completed the unit than was their perception at the beginning of semester. This change was more apparent for withdrawn students than for continuing students (“mostly irrelevant”: beginning of semester; continuing students 8.7%, withdrawn students 13.1%, Figure 4.7; end of semester; continuing students 12.8%, withdrawn students 24.1%, Figure 4.8). The results from this study support the views of Kember et al. (1990), that students are more likely to continue with their studies if they perceive the unit materials to have a direct relevance to individual interests or vocational position as it heightens the intrinsic motivation to complete the course.

## **EXTERNAL STUDIES ADMINISTRATION**

Most students used the postal service and the telephone as their main method of communication with External Studies. Very few students used electronic mail to communicate with the department or came into face-to-face contact with the staff (Figure 4.11). There was no apparent difference between continuing and withdrawn students in either their method of communication with External Studies or with the level of satisfaction with the department for administration issues. Approximately 92% of students were satisfied with the way the enrolment procedure was managed by External Studies and with the subsequent communication with the department for administration issues during the semester. Some students commented that External Studies staff were “caring, efficient and cooperative” and “prompt responses received” in relation to the management of student affairs.

Where students expressed concern with the services provided by External Studies, it was mostly about “the late receipt of unit materials”, “not knowing who the tutor was” or “having to talk to an answering machine”. In the case of the mail out of

unit materials, adjustments have been made to the procedures concerned with the development and production of learning materials but these still require further modification to cater for the growing number of distance education courses and students studying in the external mode. Three typical comments made by students were "I'd like to get the unit materials three or four weeks earlier", "two weeks delay in receiving unit materials was unacceptable for a university" and "course materials sent late ..... the feeling of having to catch up causes me problems". These comments further support the earlier recommendation relating to the mailing of unit materials.

The results of this study confirm the views of the experienced staff in External Studies that the feeling of isolation for many distance education students is compounded when they are not informed who the tutor is for the unit that semester. The inclusion of an introductory letter from the tutor with the package of learning materials can be a reassurance for students, particularly for at-risk students (e.g., students enrolled in the early stage of the course or the less experienced teachers amongst them). The following comments are illustrative of this situation. "I was not assigned a tutor and needed help with the first assignment. I phoned the coordinator of External Studies twice but got no reply. I failed my first assignment", and "ECU did not have tutor until very late. As a result second assignment sent in before I found out who tutor was and before I received 1st assignment back". These comments further support the earlier recommendation concerning the need for tutors to initiate contact with their students early in the semester.

## **COMMUNICATION WITH TUTOR**

Students predominantly used the telephone and mail service as the main means of communication with the tutor (Figure 4.12). A very small number of students used the fax, electronic mail or face-to-face contact as the main method of contacting the tutor. There was no apparent difference between continuing and withdrawn students in the method of communication with the tutor.

Although approximately 81% of students rated the level of communication with the tutor as being satisfactory, there was a significant difference ( $\chi^2 = 7.38$ ,  $df = 3$ ,  $p = 0.06$ ) between continuing and withdrawn students on the rating of the level of satisfaction with the communication with the tutor. Withdrawn students were much less satisfied with the level of communication with the tutor (Figure 4.13). Some typical comments from students that rated communication with the tutor as satisfactory were “always helpful and continued to offer extra help if needed”, “available for student contact every evening”, “returned my call promptly and was helpful” and “friendly, they always returned my calls as soon as possible and rang me to save me money”. Previous research (Sweet, 1986; Kember, 1989) also indicates that direct telephone contact between the academic staff and the students has a positive influence on student commitment and persistence. With a high proportion of students making use of the telephone to communicate with the tutor, the effective use of voicemail by university staff is essential. For example, tutors can modify the voicemail message to address common concerns of students that arise during the semester. The tutors should also incorporate in their voicemail message a request that students leave a contact number and time at which they will be available for the return call. The provision of this information will assist the tutors considerably and reduce the students’ levels of frustration.

Other written responses by students indicated considerable dissatisfaction with communication with tutors. Some examples of the less favourable comments were “messages left but often not returned”, “tutor quite abrupt and unhelpful”, “I found it difficult to talk to my tutor. I didn’t feel that he responded to my questions in a manner that was helpful to me” and “tutor is available on Tuesday evenings only ..... one evening a week is not enough time”.

Communication with the tutor is often made more difficult for external students due to their geographical location and the resulting time zone differences which, in

Australia, may be up to three hours. Communication between the student and the tutor is hindered as many students enrolled in the Fourth Year of the Bachelor of Education award are classroom teachers and therefore not readily able to be contacted by telephone during school hours. Both these factors again support the use of voicemail facilities and probably, in the future, enhance the possible use of e-mail.

*It is therefore recommended that tutors in the Fourth Year of the Bachelor of Education course regularly check their voicemail and respond to students' messages promptly and, where applicable, that tutors address questions frequently asked by students in the voicemail message that they put on their phone.*

Approximately 78% of students rated assignment feedback as satisfactory, however, there was a significant difference ( $\chi^2 = 8.73$ ,  $df = 3$ ,  $p = 0.03$ ) between continuing and withdrawn students on the rating of their level of satisfaction with assignment feedback. For example, 14% of withdrawn students compared to 3% of continuing students rated assignment feedback as very unsatisfactory. In the discriminant analysis of variables known at the completion of the unit (Table 4.5), "level of satisfaction with communication with tutor" correctly classified 72% of those students who withdrew, whereas the combined four variables listed in Table 4.5 correctly classified 74% of students who withdrew from their studies. The variable "level of satisfaction with communication with tutor" correlated astonishingly highly ( $r = 0.99$ ) with the canonical discriminant function that separated continuing and withdrawn students. The two most commonly raised criticisms by students were that they were expected to submit their next assignment before receiving feedback on the last one and, secondly, the comments on their assignments were unconstructive, negative and demeaning. Some examples of students' responses concerning tutors' comments about their assignments were "often lacked supporting feedback for mark allocation"; "tutors are always negative in their comments and concentrate on academic grades rather than understanding. They tell you what not to do but offer no alternatives."; "they were brief and highly critical and demeaning. They really made me feel as though I

was incapable. No constructive criticism at all"; "I hadn't answered the question and was told so in no uncertain terms. What I really objected to was the fact I hadn't written such an essay in years and the comments on my lack of proper reference list with no example on how to do it properly or what I'd done wrong was not helpful".

As the students enrolled externally in the Fourth Year of the Bachelor of Education were mostly mature age students and experienced teachers, the tutors need to take these factors into account when providing assignment feedback. It is important that comments made by tutors are constructive, positive and encouraging. Student responses indicate this was not always the case.

*It is therefore recommended that the assignment due dates be spaced out over the semester to ensure that tutors have sufficient time to mark the assignments and for them to be returned to students in order that they receive that feedback before submitting their next assignment.*

*It is further recommended that tutors mark the assignments and return them to External Studies for mailing back to students within two weeks of their receipt.*

*It is also recommended that tutors for units in the Fourth Year of the Bachelor of Education course be made aware of the importance of providing constructive, positive and encouraging comments about students' assignments.*

### **Compatibility of Results with those of Kember's Model**

Kember (1995) describes 15 sub-scales (including the four ASI sub-scales) computed from a factor analysis of his DESP inventory that were subsequently submitted to a second-order factor analysis to develop four scales (i.e., "social integration", "external attribution", "academic integration" and "academic incompatibility") that form the major components of his model of persistence in distance education (Figure 2.7). The model has positive and negative paths for both the social integration and academic integration variables. The positive social integration variable, "emotional encouragement", has three sub-scales; enrolment encouragement (4 items), study encouragement (4 items) and family support (3 items). The negative social integration variable, "external attribution" has four sub-scales;

insufficient time (4 items), events hinder study (3 items), distractions (7 items), and potential drop-out (3 items). The positive academic integration, "academic accommodation" scale has five sub-scales; deep approach (4 items), intrinsic motivation (4 items), positive impression of the course (5 items), positive telephone counselling (4 items) and reading habit (3 items). Lastly, the negative academic integration scale, "academic incompatibility" has five sub-scales; surface approach (6 items), extrinsic motivation (4 items), negative impression of the course (6 items), English ability (4 items) and potential drop-out (3 items). The measure of persistence used by Kember et al. (1992, 1994) and Kember (1995) was the ratio:

$$\frac{\text{number of modules (courses) failed}}{\text{number of modules attempted}}$$

A replication study (Kember et al., 1994) to test the veracity of the earlier model (Kember et al., 1992) substantially confirmed the model's applicability across a wide range of students studying in the external mode.

The focus of the research into the reasons for withdrawal of students enrolled externally in the Fourth Year of the Bachelor of Education course was slightly different to that of Kember et al. (1992, 1994) and Kember (1995) in that the dependent variable was dichotomous. That is, whether students continued with all units for which they had enrolled or whether they withdrew from at least one unit. Kember et al. (1992, 1994) and Kember's (1995) outcome variable was a ratio with a numerical range from zero to one, with students passing all courses having a ratio of zero. No attempt was made in the current study to correlate the independent variables with the students' academic results. Therefore, Kember's model is not directly comparable with this study's second main objective, however, the variables from his model seem the most applicable in the literature to be associated with student progress in distance education. It was for this reason that Kember's variables have been examined for association with withdrawal of students enrolled externally in the Fourth Year of the Bachelor of Education award,

although his model has not been tested nor has there been any attempt to replicate his model.

In contrast to the findings of Kember et al. (1994) and Kember (1995) where only a few of the background variables were significantly, but weakly, correlated with the outcome ratio, entry characteristics and perceptions of the external Fourth Year of the Bachelor of Education students before the semester commenced were able to correctly classify 69.35% of students according to whether they continued or withdrew (i.e., 19.35% better than a random allocation). Responses to two specific questions ("stage in the course" and "number of years teaching experience") were able to correctly classify 63.3% of students as withdrawn or continuing.

Kember et al. (1994) report a high correlation between students who display intrinsic motivation and utilise a deep approach to learning with the outcome ratio. In contrast, none of the four ASI sub-scales were useful discriminators of withdrawal or persistence in the study (deep approach correctly classified 51.8%, extrinsic motivation correctly classified 55.2%, intrinsic motivation correctly classified 51.4% and surface approach correctly classified 47.6%).

The combination of items to make up Kember et al. (1995) 11 sub-scales are very different and show no congruence with the grouping of items to make up the 15 sub-scales shown in Table 4.7. The 15 factors (sub-scales) in the study of Bachelor of Education students suggests a less parsimonious solution than that obtained by Kember et al. (1992, 1994). This may be the result of different dependent variables (i.e., the ratio of failures to modules attempted compared with the dichotomous variable withdrawn/continuing) or different background characteristics of the students in the groups studied. In Kember's studies (summarised in Kember, 1995) the student samples have been drawn from a cross section of courses from different levels (e.g., textiles - certificate level, management - masters degree, taxation - certificate level, student guidance - postgraduate diploma, business - bachelor's degree), whereas the

entire population in this study came from students enrolled externally in the Fourth Year of the Bachelor of Education course. Most were teachers, in their early 30s, who had been teaching between 5 and 12 years. They had already completed their undergraduate qualification, most probably as on-campus students, and would have been familiar with the administrative practices and procedures of a tertiary institution.

The very large number of items identified in the current study that have high loadings ( $> 0.3$ ) on the first five sub-scales, together with both positive and negative loadings, makes it difficult to adequately describe or appropriately label each of the sub-scales, as Kember (1995) has done for his 11 sub-scales. It is however, interesting to note that the first factor (scale) in the second-order factor analysis of this study accounts for 15.9% of total variance and the seven factors account for 66% of total variance. When submitted to a discriminant analysis these seven factors correctly classified approximately 64% of withdrawn and continuing students. In contrast, Kember's (1995) five scales from his second-order factor analysis accounted for less than 50% of total variance. The large number of sub-scales and scales, and the moderate level of variance accounted for by the factors suggests that the reasons for withdrawal are, as earlier suggested, multi-faceted.

In contrast with the view of Kember et al. (1994) that persistence (continuing to pass) in distance education courses for adult students can not be explained simply in terms of entry characteristics, the students enrolled externally in the Fourth Year of the Bachelor of Education course that withdrew could be discriminated from persisting students by three main factors; "early stage in the course", "having poor communications with their tutor" and "having a slightly lower course average". Although, as Kember (1995) discusses, the students have nominated work, family and study commitments (external attribution) to be the main reasons for their withdrawal.



## SUMMARY AND CONCLUSION

The study set out to determine the extent to which a range of variables were related to attrition and persistence of external students enrolled in the Fourth Year of the Bachelor of Education course. Students who were enrolled externally in the Fourth Year of the Bachelor of Education course during second semester, 1995 at the university where this study was conducted were predominantly female, in their early thirties, living in Western Australia, had completed their first teaching qualification nearly nine years ago and had subsequently had six years teaching experience. They were mostly classroom teachers who were studying part-time, were less than half way through the course, had not previously withdrawn from a unit and were achieving satisfactory results. Those students who withdrew from their studies had less teaching experience, had completed fewer units and semesters of study, and had lower course averages than the continuing students. Just under one quarter of all students in this study withdrew from at least one unit in which they were enrolled with most of these withdrawals occurring before the HECS assessment date. The majority of students indicated that work, family and study commitments were the main reason(s) for their withdrawal. A number of students indicated that administration issues, such as the late receipt of unit materials and the lack of feedback from tutors on their first assignment before the HECS assessment date, contributed to their decision to withdraw. Withdrawn students were much less satisfied with the level of communication with the tutor and a greater proportion of these students rated assignment feedback as very unsatisfactory.

The second research question in this thesis was to determine the extent to which the sub-scales and scales developed from the DESP inventory (Kember et al., 1995) were associated with attrition and persistence of external students enrolled in the Fourth Year of the Bachelor of Education course. A discriminant analysis using the 15 DESP inventory sub-scales identified by Kember et al. (1995), correctly classified

67.54% of students according to whether they continued or withdrew from their studies. "Insufficient time", "events hinder study", "potential drop-out" and "negative impression of the course" were significantly and positively correlated with student withdrawal in this study. Kember's (1992) "external attribution" scale was the only scale to be positively correlated with withdrawal.

The results of administering the DESP inventory to the students enrolled externally in the Fourth Year of the Bachelor of Education award indicated that the underlying variables associated with student withdrawal and persistence are multifaceted, as documented by Kember (1995). However, a summary of the DESP inventory data using factor analysis produced a different series of sub-scales and scales that accounted for a slightly higher percentage of total variance in this relatively homogeneous study population than was reported by Kember and his colleagues for a cross section of students in different courses in Hong Kong. The appreciable difference between the sub-scales and scales of Kember et al. (1995) and those reported in this study are probably a reflection of the difference in the student profiles in the courses that were investigated.

In order to reduce the attrition rate for students enrolled externally in the Fourth Year of the Bachelor of Education course the students need to be adequately counselled on their proposed study plans to ensure the work loads they have nominated are manageable in view of their other family and work commitments. The unit materials should be mailed by a date that ensures most students receive them prior to the commencement of semester. Tutors need to initiate communication with their students early in the semester. The due dates for assignments should be planned to enable students to receive feedback on their first assignment before having to submit their next one. In order to enhance student learning and maintain high levels of intrinsic motivation, assignment feedback needs to be critically constructive and tutors need to provide positive suggestions on how future assignments might be improved.

Faculty staff need to be advised of the categories of students most at-risk in their classes so that they can provide these students with additional support, particularly during the early part of the semester. The university should consider offering Bachelor of Education units during the school vacation periods in addition to the normal semester.

## **Recommendations**

*It is recommended that External Studies staff and tutors have a cognisance of the pressures on students enrolled externally in the Fourth Year of the Bachelor of Education course associated with the organisation of work and personal commitments to enable these students to continue in their studies, and where appropriate, be prepared to negotiate submission dates for assignments.*

*It is recommended that External Studies staff and tutors be advised that the at-risk students in the Fourth Year of the Bachelor of Education award are those in the early stage of the course, with limited teaching experience and lower unit grades. Special support provisions need to be focussed on these students.*

*It is recommended that External Studies staff mail unit materials by a date that ensures students receive them before the first day of semester, that tutors initiate contact with students in their class early in the semester and that the first assignment is returned to students prior to the HECS assessment date.*

*It is recommended that tutors in the Fourth Year of the Bachelor of Education course regularly check their voicemail and respond to students' messages promptly, and, where applicable, that tutors address questions frequently asked by students in the voicemail message that they put on their phone.*

*It is recommended that tutors for units in the Fourth Year of the Bachelor of Education course be made aware of the importance of providing constructive, positive and encouraging comments about students' assignments.*

*It is recommended that the assignment due dates be spaced out over the semester to ensure that tutors have sufficient time to mark the assignments and for them to be returned to students in order that they receive that feedback before submitting their next assignment.*

*It is recommended that tutors mark the assignments and return them to External Studies for mailing back to students within two weeks of their receipt.*

*It is recommended that the university, in addition to offering the Fourth Year of the Bachelor of Education course during the traditional semester period, provide students with the opportunity to complete units in this award during the primary and secondary school vacation times.*

## REFERENCES

- Baath, J.P. (1982). Distance students' learning: Empirical findings and theoretical deliberations. *Distance Education*, 3 (1), 6-27.
- Bar-Tal, D. (1978). Attitudinal analysis of achievement-related behaviour. *Review of Educational Research*, 48, 259-271.
- Bean, J.P. & Metzner, B.S. (1985). A conceptual model of nontraditional undergraduate student attrition. *Review of Educational Research*, 55 (4), 485-540.
- Bernard, R.M. & Amundsen, C.L. (1989). Antecedents to drop-out in distance education: Does one model fit all? *Journal of Distance Education*, 4 (2), 25-46.
- Biggs, J.B. & Moore, P.J. (1993). *The process of learning*. Sydney: Prentice Hall.
- Billings, D.M. (1988). A conceptual model of correspondence course completion. *The American Journal of Distance Education*, 2 (2), 23-35.
- Blackmore, A.M. (1994) *Research statistics from scratch*. Perth: Edith Cowan University.
- Cabrera, A.F., Castaneda, M.B., Nora, A., & Hengstler, D. (1992). The convergence between two theories of college persistence. *Journal of Higher Education*, 63 (2), 143-164.
- Cochran, W.G. (1954). Some methods for strengthening the common  $\chi^2$  tests. *Biometrics*, 10, 417-451.
- Cookson, P.S. (1989). Research on learners and learning in distance education: A review. *The American Journal of Distance Education*, 3 (2), 22-34.
- Dawkins, J.S. (1987). *Higher education: A policy discussion paper*. Canberra: AGPS.
- Dawkins, J.S. (1988). *Higher education: A policy statement*. Canberra: AGPS.
- Dille, B. & Mezack, M. (1991). Identifying predictors of high risk amongst community college telecourse students. *The American Journal of Distance Education*, 5 (1), 1991.

- Durkheim, E. (1961). *Suicide* (John Spaulding & George Simpson, Trans.). London: Routledge & Kegan.
- Fishbein, M. (1967). Attitude and the prediction of behaviour. In M. Fishbein (Ed.), *Readings in attitude theory and measurement* (pp. 447-492). New York: John Wiley & Sons.
- Game, C. (1994). The changing environments in distance education course development: Using openness to meet the needs of both clients and teachers. Keynote addresses: Proceedings of the Distance Education, *Windows on the Future Conference* (pp. 62-78). Wellington, N.Z.: The Correspondence School.
- Garrison, D.R. (1987). Researching dropout in distance education. *Distance Education*, 8 (1), 95-101.
- Herrington, J., Fox, R., Gillard, D. & Rainford, L. (1991). *Designing study materials: A WADEC guide for authors and desktop publishers*. Perth: WADEC.
- Kaplan, K. & Fishbein, M. (1969). The source of beliefs, their saliency and prediction of attitude. *The Journal of Social Psychology*, 78, 63-74.
- Kember, D. (1981). Some factors affecting attrition and performance in a distance education course at the University of Papua New Guinea. *Distance Education*, 2 (2), 164-188.
- Kember, D. (1989). A longitudinal-process model of drop-out from distance education. *Journal of Higher Education*, 60 (3), 278-301.
- Kember, D. (1995). *Open learning courses for adults: A model of student progress*. Englewood Cliffs, New Jersey: Educational Technology Publications.
- Kember, D., Lai, T., Murphy, D., Siaw, I. & Yuen, K.S. (1992). Student progress in distance education: Identification of explanatory constructs. *British Journal of Educational Psychology*, 62, 285-298.

- Kember, D., Lai, T., Murphy, D., Siaw, I. & Yuen, K.S. (1994). Student progress in distance education courses: A replication study. *Adult Education Quarterly*, 45 (1), 286-301.
- Kember, D., Lai, T., Murphy, D., Siaw, I. & Yuen, K.S. (1995). *Student progress in distance education. A handbook for: The DESP inventory and the interview schedule*. Unpublished manuscript, Hong Kong Polytechnic University, Hong Kong.
- Kember, D., Lai, T., Murphy, D., Siaw, I., Wong, J. & Yuen, K.S. (1990). Naturalistic evaluation of distance learning courses. *Journal of Distance Education*, 5 (1), 38-52.
- Kember, D., Murphy, D., Siaw, I., & Yuen, K. (1991). Towards a causal model of student progress in distance education: research in Hong Kong. *The American Journal of Distance Education*, 5 (2), 3-15.
- Kennedy, D. & Powell, R. (1976). Student progress and withdrawal in the Open University. *Teaching at a Distance*, 7, 61-75.
- Pascarella, E.T. & Chapman, D.W. (1983). A multiinstitutional, path analytic validation of Tinto's model of college withdrawal. *American Educational Research Journal*, 20 (1), 87-102.
- Pascarella, E.T. & Terenzini, P.T. (1979). Interaction effects in Spady's and Tinto's conceptual models of college drop-out. *Sociology of Education*, 52, 197-210.
- Pascarella, E.T. & Terenzini, P.T. (1980). Predicting freshman persistence and voluntary drop-out decisions from a theoretical model. *Journal of Higher Education*, 51 (1), 60-75.
- Pascarella, E.T. (1980). Student-faculty informal contact and college outcomes. *Review of Educational Research*, 50 (4), 545-595.
- Price, D., Harte, J. & Cole, M. (1992). *Student progression in higher education: A study of attrition at Northern Territory University*. Canberra: AGPS.

- Roberts, D. (1984). Ways and means of reducing early student drop-out rates. *Distance Education*, 5 (1), 50-73.
- Roberts, D., Boyton, B., Buete, S. & Dawson, D. (1991). Applying Kember's linear process model to distance education at Charles Sturt University, Riverina. *Distance Education*, 12 (1), 54-84.
- Sewart, D. (1981). Distance education - a contradiction in terms? *Teaching at a Distance*, 19, 8-18.
- Spady, W. G. (1970). Dropouts from higher education: An interdisciplinary review and synthesis. *Interchange*, 1 (1), 64-85.
- Submission to the committee for quality assurance in higher education*. (1994). Perth, Western Australia: Edith Cowan University.
- Sweet, R. (1986). Student drop-out in distance education: An application of Tinto's model. *Distance Education*, 7 (2), 201-213.
- Tabachnick, B. G. & Fidell, L. S. (1989). *Using multivariate statistics*. New York: Harper & Row.
- Thompson, G. & Knox, A.B. (1987). Designing for diversity: Are field-dependent learners less suited to distance education programs of instruction? *Contemporary Educational Psychology*, 12 (1), 17-29.
- Thompson, G. (1984). The cognitive style of field-dependence as an explanatory construct in distance education drop-out. *Distance Education*, 5 (2), 286-293.
- Tinto, V. (1975). Dropout from higher education: A theoretical synthesis of recent research. *Review of Educational Research*, 45 (1), 89-125.
- Tinto, V. (1982). Limits of theory and practice in student attrition. *Journal of Higher Education*, 53 (6), 687-700.
- Treyvaud, E.R. & Davies, A.T. (1991). *Cooperative education for professional development in regional areas. Evaluation and Investigations Program*. Department of Employment, Education and Training, Canberra: AGPS.



- Verduin, J.R. & Clark, T.A. (1991). *Distance education: The foundations of effective practice*. San Francisco: Jossey-Bass.
- Weiner, B. (1972). Attribution theory, achievement motivation and the educational process. *Review of Educational Research*, 42, 203-215.
- Wilkinson, T.W. & Sherman, T.M. (1989). Distance education and student procrastination. *Educational Technology*, 29 (12), 24-27.
- Wong, A. & Wong, S.C.P. (1978-79). The relationship between assignment completion and the attrition and achievement in correspondence courses. *Journal of Educational Research*, 72, 165-168.
- Woodley, A. & Parlett, M. (1983). Student drop-out. *Teaching at a Distance*, 24, 2-23.
- Yuen, K.S., Siaw, I., Hung, G. & Hatchard, D. (1994). A study of the drop-out of Hong Kong's distance learners. *Distance Education: Windows on the Future Conference Proceedings* (pp. 512-518). Wellington, N.Z.: The Correspondence School.
- Zajkowski, M.E. (1992). Recent research at The Open Polytechnic of New Zealand (TOPNZ). *Research in Distance Education*, 4 (4), 5-6.

## **APPENDICES**

## **APPENDIX A**

# EDITH COWAN UNIVERSITY

## University Learning Systems

### External Student Survey

		Office Use Only
1	Name ..... Surname/Family name                      Other names	<div style="border: 1px solid black; width: 80px; height: 30px; margin: 5px auto;"></div>
2	Student I.D. Number <div style="display: inline-block; width: 20px; height: 20px; border: 1px solid black; margin: 0 5px;"></div> <div style="display: inline-block; width: 20px; height: 20px; border: 1px solid black; margin: 0 5px;"></div> <div style="display: inline-block; width: 20px; height: 20px; border: 1px solid black; margin: 0 5px;"></div> <div style="display: inline-block; width: 20px; height: 20px; border: 1px solid black; margin: 0 5px;"></div> <div style="display: inline-block; width: 20px; height: 20px; border: 1px solid black; margin: 0 5px;"></div> <div style="display: inline-block; width: 20px; height: 20px; border: 1px solid black; margin: 0 5px;"></div>	12
3	<p>Please tick the box below that most closely describes your current position.</p> <div style="display: flex; align-items: flex-start;"><div style="margin-right: 10px;"><div style="border: 1px solid black; width: 25px; height: 20px; margin-bottom: 5px;"></div><div style="border: 1px solid black; width: 25px; height: 20px; margin-bottom: 5px;"></div><div style="border: 1px solid black; width: 25px; height: 20px; margin-bottom: 5px;"></div><div style="border: 1px solid black; width: 25px; height: 20px; margin-bottom: 5px;"></div><div style="border: 1px solid black; width: 25px; height: 20px; margin-bottom: 5px;"></div><div style="border: 1px solid black; width: 25px; height: 20px;"></div></div><div><p>1      Principal</p><p>2      Deputy Principal</p><p>3      Senior Teacher</p><p>4      Classroom teacher</p><p>5      Home duties</p><p>6      Other (please specify) .....</p></div></div>	13
4	<p>In what year did you complete your most recent teaching qualification?</p> <div style="display: flex; justify-content: center; align-items: center; margin-top: 10px;"><div style="border: 1px solid black; width: 30px; height: 25px; margin: 0 5px;"></div><div style="border: 1px solid black; width: 30px; height: 25px; margin: 0 5px;"></div><div style="border: 1px solid black; width: 30px; height: 25px; margin: 0 5px;"></div><div style="border: 1px solid black; width: 30px; height: 25px; margin: 0 5px;"></div></div>	14
5	<p>How many years of equivalent full-time teaching/education administration experience do you have?</p> <div style="display: flex; justify-content: center; align-items: center; margin-top: 10px;"><div style="border: 1px solid black; width: 30px; height: 25px; margin: 0 5px;"></div><div style="border: 1px solid black; width: 30px; height: 25px; margin: 0 5px;"></div></div>	15

- 6 If given a choice which of the following modes of study would you have preferred this semester?
- ☐ 1 External Mode 16
- ☐ 2 Internal/On-campus Mode
- 7 Please rank (6 highest - 1 lowest) the following benefits that you expect to gain from completing this course (Fourth Year of Bachelor of Education).
- ☐ Career advancement 17
- ☐ Increased employment opportunities 18
- ☐ Job security 19
- ☐ Personal fulfilment 20
- ☐ Acquisition of knowledge 21
- ☐ Increased status from gaining the award 22
- 8 Listed below are a number of potential difficulties you may encounter this semester as an external student. Please rank (5 highest - 1 lowest) them in order of your perception of the difficulty.
- ☐ Understanding unit material 23
- ☐ Completing assignments on time 24
- ☐ Communicating with your tutor 25
- ☐ Financial (HECS, text-books, computing, etc.) 26
- ☐ Organisation of work and personal commitments around your study 27
- 9 To what extent do you anticipate the unit materials will be applicable to your professional needs?
- ☐ 1 Totally relevant
- ☐ 2 Mostly relevant
- ☐ 3 Mostly irrelevant 28
- ☐ 4 Totally irrelevant

10	Do you envisage any of the following aspects of your life will adversely affect your studies this semester?			Office Use Only
	Yes 1	No 2	Maybe 3	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Reduced social life 29
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Personal factors 30
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Family factors due to study commitments 31
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Work related factors 32
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Ill health 33
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Financial factors 34
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Other (please specify) ..... 35
11	How would you rate the administration by External Studies of your enrolment procedure this semester?			
	<input type="checkbox"/>	1	Very satisfactory	
	<input type="checkbox"/>	2	Satisfactory	
	<input type="checkbox"/>	3	Unsatisfactory	
	<input type="checkbox"/>	4	Very unsatisfactory	
	Please elaborate on the above response			
	.....			36
	.....			
	.....			

**Thank you for your assistance. Please return this questionnaire in the postage paid envelope by return mail.**

## **APPENDIX B**



Dear Student,

Thank you for completing the questionnaire I sent you earlier this semester.

I also indicated when I first wrote to you that there would be another questionnaire mailed to you later in the semester. This second questionnaire is enclosed and it incorporates the Distance Education Student Progress (DESP) inventory. It seeks your opinion and attitudes on a range of issues related to your studies and the reason why you have withdrawn from the unit you commenced at the start of this semester.

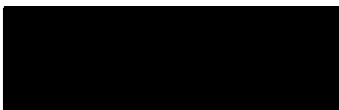
It would be very much appreciated if you would spend a few minutes completing the attached questionnaire and returning it in the reply paid envelope provided.

The data from all questionnaires will be collated in such a way that your responses will remain confidential. All questionnaires will be destroyed after the analysis has been completed so that no individual student's responses can be identified.

The results of this survey will assist University Learning Systems in its planning to more adequately meet students' needs.

Should you have any further queries relating to this questionnaire please don't hesitate to contact me.

Yours sincerely



**Eileen Thompson**  
Assistant Co-ordinator

Phone: 442 1452

Fax: 442 1330

E-Mail: [E.Thompson@cowan.edu.au](mailto:E.Thompson@cowan.edu.au)





Dear Student,

Thank you for completing the questionnaire I sent you earlier this semester.

I also indicated when I first wrote to you that there would be another questionnaire mailed to you later in the semester. This second questionnaire is enclosed and it incorporates the Distance Education Student Progress (DESP) inventory. It seeks your opinion and attitudes on a range of issues now that you have almost completed your studies this semester.

It would be very much appreciated if you would spend a few minutes completing the attached questionnaire and returning it in the reply paid envelope provided.

The data from all questionnaires will be collated in such a way that your responses will remain confidential. All questionnaires will be destroyed after the analysis has been completed so that no individual student's responses can be identified.

The results of this survey will assist University Learning Systems in its planning to more adequately meet students' needs.

Should you have any further queries relating to this questionnaire please don't hesitate to contact me.

Yours sincerely

**Eileen Thompson**  
Assistant Co-ordinator

Phone: 442 1452

Fax: 442 1330

E-Mail: [E.Thompson@cowan.edu.au](mailto:E.Thompson@cowan.edu.au)

# EDITH COWAN UNIVERSITY

## University Learning Systems

### External Student Survey

1 Name .....  
Surname/Family name Other names

Office Use  
Only

2 Student I.D. Number

3 What was your main method of communication this semester with External Studies for administration issues? (e.g. inquiries, assignment extension requests)

Tick one box only.

- ☐ 1 Electronic Mail  
☐ 2 Mail  
☐ 3 Fax  
☐ 4 Phone  
☐ 5 Face-to-Face

37

4 Which of the following most accurately describes your level of satisfaction with the communication with External Studies for these administration issues this semester?

- ☐ 1 Very satisfactory  
☐ 2 Satisfactory  
☐ 3 Unsatisfactory  
☐ 4 Very unsatisfactory

Please elaborate on the above response

.....  
.....  
.....

38

5 How applicable were your unit materials this semester to your professional needs?

Office Use  
Only

- ☐ 1 Totally relevant
- ☐ 2 Mostly relevant
- ☐ 3 Mostly irrelevant
- ☐ 4 Totally irrelevant

39

6 What was your main method of communication with your tutor this semester?

Tick one box only.

- ☐ 1 Electronic Mail
- ☐ 2 Mail
- ☐ 3 Fax
- ☐ 4 Phone
- ☐ 5 Face-to-Face

40

7 Which of the following most accurately describes your level of satisfaction with the communication with your tutor this semester?

- ☐ 1 Very satisfactory
- ☐ 2 Satisfactory
- ☐ 3 Unsatisfactory
- ☐ 4 Very unsatisfactory

Please elaborate on the above response

41

.....

.....

.....

8 Which of the following most accurately describes your level of satisfaction with your tutor's comments about your assignments this semester?

- ☐ 1 Very satisfactory  
☐ 2 Satisfactory  
☐ 3 Unsatisfactory  
☐ 4 Very unsatisfactory

Please elaborate on the above response

.....  
 .....  
 .....

Office Use  
Only

42

9 Have any of the following aspects of your life adversely affected your studies this semester?

Yes    No    Maybe  
 1       2       3

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Reduced social life	43
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Personal factors	44
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Family factors due to study commitments	45
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Work related factors	46
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Ill health	47
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Financial factors	48
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Other (please specify) .....	49

10

Listed below are a number of difficulties you may have encountered as an external student. Please rank (5 highest - 1 lowest) them in order of the difficulty you have experienced this semester.

Office Use  
Only

- |  |    |
|--|----|
| <input type="checkbox"/> Understanding unit material                                     | 50 |
| <input type="checkbox"/> Completing assignments on time                                  | 51 |
| <input type="checkbox"/> Communicating with your tutor                                   | 52 |
| <input type="checkbox"/> Financial (HECS, text-books, computing, etc.)                   | 53 |
| <input type="checkbox"/> Organisation of work and personal commitments around your study | 54 |

11

In the space below please indicate the reason(s) why you have withdrawn from your studies this semester. Any comments you wish to make will be considered strictly confidential and will only be communicated to other staff in a form that would not enable you to be identified.

.....

.....

.....

.....

.....

.....

.....

.....

55

**Thank you for your assistance. Please return this questionnaire in the postage paid envelope by return mail.**

# The DESP Inventory

For the remaining questions please tick the appropriate box to indicate your attitude to each statement.

		definitely disagree	disagree with reservations	agree with reservations	definitely agree	not applicable	don't know	Office Use Only
1.	I generally put a lot of effort into trying to understand things which seem difficult at first.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	56
2.	Lecturers seem to delight in making the simple truth unnecessarily complicated.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	57
3.	The best way for me to understand what technical terms mean is to remember the text-book definitions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	58
4.	I suppose I am more interested in the qualifications I'll get than in the course I'm taking.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	59
5.	I usually set out to understand thoroughly the meaning of what I am asked to read.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	60
6.	I find I have to concentrate on memorising a good deal of what I have to learn.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	61
7.	I chose the present course mainly to give me a chance of a really good job afterwards.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	62
8.	I generally choose what I study more from the way it fits in with career plans than from my own interests.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	63
9.	My main reason for doing this course is so that I can learn more about the subjects which really interest me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	64
10.	When I'm reading I try to memorise important facts which may come in useful later.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	65

not applicable  
 don't know  
 definitely disagree  
 disagree with reservations  
 agree with reservations  
 definitely agree

Office  
Use  
Only

11.	I find that studying academic topics can often be really exciting.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	66
12.	When I'm tackling a new topic, I often ask myself questions about it which the new information should answer.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	67
13.	I spend a good deal of my spare time in finding out more about interesting topics in the course.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	68
14.	My main reason for doing this course is that it will help me to get a better job.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	69
15.	I usually don't have time to think about the implications of what I have read.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	70
16.	I find academic topics so interesting, I should like to continue with them after I finish this course.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	71
17.	I often find myself questioning things that I read in books or study materials.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	72
18.	I generally prefer to tackle each part of a topic or problem in order, working out one at a time.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	73
19.	Often I find I have read things without having a chance to really understand them.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	74
20.	I find it difficult to "switch tracks" when working on a problem: I prefer to follow each line of thought as far as it will go.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	75
21.	I prefer to follow well tried approaches to problems rather than anything too adventurous.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	76
22.	Tutors seem to want me to be more adventurous in making use of my own ideas.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	77
23.	I find it better to start straight away with the details of a new topic and build up an overall picture in that way.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	78
24.	I find I tend to remember things best if I concentrate on the order in which the lecturer presented them.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	79
25.	I think it is important to look at problems rationally and logically without making intuitive jumps.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	80
26.	Although I generally remember facts and details, I find it difficult to fit them together into an overall picture.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	81

not applicable  
don't know  
definitely disagree  
disagree with reservations  
agree with reservations  
definitely agree

27.	I found the study guide useful in preparing for the course.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	82
28.	The learning materials are presented in a confusing way.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	83
29.	The activities/self-assessment questions have helped me to learn.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	84
30.	I do not understand a lot of English words in the study materials.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	85
31.	The type of work required by assignments is very different to what I expected.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	86
32.	My spouse encouraged me to enrol for this course.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	87
33.	I enjoy reading so I am suited to distance learning courses.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	88
34.	My employer was supportive while I was studying.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	89
35.	The course is not run at the most suitable time of the year.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	90
36.	My spouse offered support while I was studying.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	91
37.	I usually spend a lot of time with my family.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	92
38.	I don't need the support of my family to succeed in this course.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	93
39.	My family encouraged me to enrol in this course.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	94
40.	The study booklets are easy to learn from.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	95
41.	I prefer to spend time doing things other than studying.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	96
42.	As I work long hours it is difficult to find time to study.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	97
43.	I have a busy social life.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	98
44.	The support of my family means a lot to me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	99
45.	I read other books as well as the study materials and set texts.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	100



	definitely agree	agree with reservations	disagree with reservations	definitely disagree	don't know	not applicable	Office Use Only
46. My employer encouraged me to enrol in this course.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	101
47. The telephone counselling service is useful.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	102
48. Long hours at work left little time for study.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	103
49. The assignments are too difficult.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	104
50. The tutor's comments on my assignments have helped me to study.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	105
51. The course was administered very efficiently.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	106
52. The telephone counselling service provided help when I needed it.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	107
53. The time allowed for completing the course is too short.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	108
54. My friends encouraged me to enrol in this course.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	109
55. I seem to have so many other things to do there is never enough time for study.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	110
56. A change to my work situation made it difficult to complete the course.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	111
57. I am very determined to finish the course.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	112
58. I went out a lot, rather than studying.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	113
59. I often consider dropping out from the course.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	114
60. I often wonder whether all the study is worth the effort.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	115
61. Telephone counselling is a waste of time.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	116
62. A change in my work left me without enough time for study.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	117
63. My workmates encouraged me to study.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	118
64. I was ill during the course, so found it difficult to keep up.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	119
65. Personal/family circumstances, unseen at the time of enrolment, hindered my studies.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	120
66. I read widely.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	121

Office  
Use  
Only

not applicable

don't know

definitely disagree

disagree with reservations

agree with reservations

**definitely agree**

- |     |  |                          |                          |                          |                          |   |                          |     |
|-----|--|--------------------------|--------------------------|--------------------------|--------------------------|---|--------------------------|-----|
| 67. | My family encouraged me to study because they thought the qualification was important. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | - | <input type="checkbox"/> | 122 |
| 68. | My spouse became annoyed because I spent so much time studying.                        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |   | <input type="checkbox"/> | 123 |
| 69. | My children interfered with my studies.  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | - | <input type="checkbox"/> | 124 |
| 70. | I do not let anything interfere with my studies.                                       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |   | <input type="checkbox"/> | 125 |
| 71. | My friends wanted me to go out rather than study.                                      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |   | <input type="checkbox"/> | 126 |
| 72. | I use the telephone counselling service often.   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |   | <input type="checkbox"/> | 127 |

Thank you for completing this questionnaire

## **APPENDIX C**



Dear Student

We at University Learning Systems are interested in improving the administration and quality of the teaching materials supplied to students. We are also interested in understanding the characteristics of students enrolled externally in the Fourth Year of the Bachelor of Education award.

As part of my Master of Education thesis I am investigating the variables associated with attrition and persistence of external students enrolled in the Fourth Year of the Bachelor of Education course.

It would be very much appreciated if you would spend a few minutes completing the attached questionnaire and returning it in the reply paid envelope provided.

This is the first of two questionnaires and seeks information about your educational background and perceptions of external study. The second questionnaire will be mailed to you later in the semester and will seek additional information resulting from your experience as an external student in your current unit of study.

The data from all questionnaires will be collated in such a way that your responses will remain confidential. All questionnaires will be destroyed after the analysis has been completed so that no individual student's responses can be identified.

The results of this survey will assist University Learning Systems in its planning to more adequately meet students' needs.

Should you have any further queries relating to this questionnaire please don't hesitate to contact me.

Yours sincerely



**EILEEN THOMPSON**  
Assistant Co-ordinator

Phone: 442 1452  
Fax: 442 1330  
E-mail: e.thompson@cowan.edu.au

## **APPENDIX D**

## QUESTIONNAIRE FOR STUDENTS ENROLLED IN THE FOURTH YEAR OF THE BACHELOR OF EDUCATION, 1995

I am interested in the variables associated with attrition and persistence of external students enrolled in the Fourth Year of the Bachelor of Education course. In order to do this I will be asking you to fill in two (2) short questionnaires about your study in this course over the semester.

Your participation is voluntary and will not affect your marks and work in this course. You are assured that all your responses will remain confidential. Your individual responses to the questionnaires will not be available to other staff as they will be coded by myself as principal researcher. No names will be available and only analysed results will be reported. In addition I seek your permission to obtain the following information from your computerised student record: age, gender, place of residence and stage in the course.

I hope you will choose to participate in the study. It is important we learn more about factors affecting the progress of your study so that we can meet your needs more effectively.

It is necessary to include your name and student identification number so that information you provide in the follow up questionnaire can be matched with your initial responses.

I give permission for Eileen Thompson to access my student record. I understand this information will remain confidential and will be used for research purposes only. I agree that the research data gathered for this study may be published provided I am not identifiable.

NAME: \_\_\_\_\_ (PLEASE PRINT YOUR NAME IN FULL)

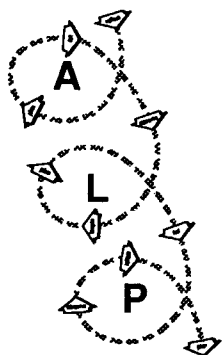
Signature \_\_\_\_\_ Date \_\_\_\_\_

Thank you for your participation and co-operation.

Eileen Thompson  
Assistant Co-ordinator  
University Learning Systems  
Phone: 442 1452  
Fax: 442 1330  
E-mail: e.thompson@cowan.edu.au

Please contact me if you have any queries regarding this research.

## **APPENDIX E**



# Action Learning Project

Coordinator of the Action Learning Project  
Educational Development Unit  
Hong Kong Polytechnic University  
Hung Hom  
Kowloon  
HONG KONG  
Telephone (852) 2766 6274  
Facsimile (852) 2334 1569  
E-mail etkember@hkpucc.polyu.edu.hk

Eileen Thompson,  
External Studies,  
Edith Cowan University,  
Perth,  
WA,  
Australia.

24 March 1995

Dear Eileen,

Thank you for your fax. My colleagues and I would be happy for you to use the DESP inventory. I enclose for you a copy of the handbook for the DESP inventory and the interview schedule used in the project in Hong Kong. This contains a copy of the questionnaire itself. It also has a listing for the SPSS entry program we used. We also used this for the path analysis—using the regression sub-program.

The best source of information about the development, testing and use of the inventory and interpreting results from it is a book which has now been printed. The reference is below and I will enclose an information leaflet. I suggest that you read Chapters 6 and 8 before proceeding with your proposed study as I have reservations about the value of both institutional statistics and reasons given by students for withdrawal in interpreting and researching drop-out.

Kember, D. (1995)

*Open learning courses for adults: A model of student progress.*

Englewood Cliffs, NJ: Educational Technology Publications.

Good luck if you decide to proceed with using the instrument. Do not hesitate to contact me if you want any more information or advice.

Yours sincerely,