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**A BACHELOR OF PROPERTY, ATTRITION AND FLEX STUDENTS: A
PRELIMINARY EXAMINATION OF THE CHALLENGES OF RETAINING
STUDENTS**

ABSTRACT

This paper examines the literature on student attrition and proposes a framework for the examination of attrition of students from CQUniversity's Bachelor of Property. The examination and understanding of student attrition is of importance as attrition is not only of concern to higher education providers, property educators and the property profession to ensure the continued viability of the Bachelor of Property as a program of study and a tertiary study option for aspiring property professionals.

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A BACHELOR OF PROPERTY, ATTRITION AND FLEX STUDENTS: AN EXAMINATION OF THE CHALLENGES OF RETAINING STUDENTS

INTRODUCTION

The focus on student attrition will increase as the new Commonwealth funding model for higher education is implemented where universities will be funded in accordance with the number of students studying at the institution not on pre-allocated student places (Australian Government, 2008). The Department of Education Employment and Workplace Relations (2004) uses the term “attrition” to ‘measure the proportion of students in a particular year who neither graduate nor continue studying in an award course at the same institution in the following year’. An issue with this definition of attrition is that the focus is on student attrition at an institutional level. In other words, attrition is calculated on the basis of a loss of a student from the University not a particular program or course. As will be argued in this paper, understanding why students may exit a particular program must necessarily assist with improving attrition at the institutional level. Relevantly, CQUniversity’s Strategic Plan (2010) for 2011–2014 refers to the University’s aim at reducing the student attrition rate in all programs and courses and to increase the student progression rate in all programs and courses. At CQUniversity, the Bachelor of Property is unique as a program because it is delivered in distance mode only. As a mode of education, a program delivered by distance generally reveals a higher student attrition rate when compared to traditional (on-campus) delivery (Tresman 2002). This is certainly apparent when the student attrition statistics for the Bachelor of Property are analysed. An understanding of student attrition from the program is vital not only with respect to the continued viability and reputation of the program, but the ability of the program to contribute to the University’s strategic goals. As property educators attrition has been brought into to sharp focus. Further the viability of the program needs to be ensured so that CQUniversity remains a tertiary option for aspiring property professionals. The factors influencing student attrition have been the subject of research with a number of models being proposed (Astin 1985; Bean 1980; Metzner & Bean 1987; Kamens 1971; Summerskill 1962; Tinto 1975; Witt & Handal 1984; Cross 1981; Yorke 1999; Carroll, Ng & Birch 2009). One particular model is the Chain of Response Model (Cross 1981). The Change of Response Model categorises barriers to students’ participation in tertiary education as being situational, institutional or dispositional in nature (Carroll, Ng & Birch 2009). This paper argues that the Chain of Response Model is a relevant framework to examine student attrition from CQUniversity’s Bachelor of Property. It must be stressed that the paper will focus upon student attrition from the program and is not reflective of the levels of student attrition

from CQUniversity. Further, it must be stressed that this paper is a preliminary piece of analysis which is acting as a background to a planned, more extensive survey of students who have left the Bachelor of Property.

The paper is presented in the following parts. Part 1 examines CQUniversity's Bachelor of Property and student attrition from the program. The data from 2007–2009 will be presented. This data is used as it is the “finalized” data contained in CQUniversity's Academic Data Dashboard about the Bachelor of Property. Part 2 examines the literature surrounding attrition and Part 3 proposes a framework for the examination of student attrition in the context of CQUniversity's Bachelor of Property.

LITERATURE REVIEW

Carroll, Ng and Birch noted (2009, p. 198) that ‘[w]hile student retention has been extensively researched in an on-campus undergraduate context few studies have concentrated on mature-aged students undertaking their studies by distance education.’ Particularly, with respect to retention in distance education programs Susan Tresman (2002) has noted that distance education as a model of education delivery generally experiences a higher student attrition rate when compared to traditional (on-campus) delivery. As Carroll, Ng and Birch argue (2009, p. 197), and this paper has acknowledged, there is an economic element to the retention of students. They suggest that ‘[t]he logic of customer retention in the services sector – that it is cheaper to retain existing customers than it is to recruit new ones – applies as much to the tertiary education section as any commercial service.’ As Hinton (2004, p. 14) has argued elsewhere:

The central focus for administrators in terms of viability and sustainability is university funding. Most researchers agree that a major dilemma for higher education institutions is that governments are increasingly making universities and colleges accountable for the finances that they receive from state coffers.

Yorke (1999) takes the argument further and agrees that institutions should be held accountable for their attrition rates as it is a loss of output in both human and monetary costs. In sum it is evident that the economic imperative acting upon the contemporary higher education sector is making the retention of students, by necessity, a focus of institutional energy. Because of the cost to the institution of student attrition Carroll, Ng and Birch (2009, p. 197) argue that:

a comprehensive understanding of the factors that impact upon the retention and progression of current students is of critical importance to higher

education providers if they wish to remain viable in increasingly uncertain economic [and political] times.

However, to gain a comprehensive understanding of the factors student-focussed research is required to gather the necessary information from students to inform the debate. The circularity of the issue is highlighted by Hinton (2004, p. 14) where she has argued that, '[u]ndertaking studies [on attrition] illustrates the need for institutional research that analyses the complexity of attrition in order to persuade others that student attrition must be treated as a strategic issue.

In saying that, there has been research undertaken with respect to analysing student attrition from higher education. One particular model of interest is the Chain of Response Model which was developed by K Patricia Cross (1981). Cross developed the Chain of Response Model to explore the barriers to mature-aged students' participation in tertiary education. The Model was recently used by Carroll, Ng and Birch and 'categorises barriers to students' participation in tertiary education as being situational, institutional or dispositional in nature' (2009, p. 198)

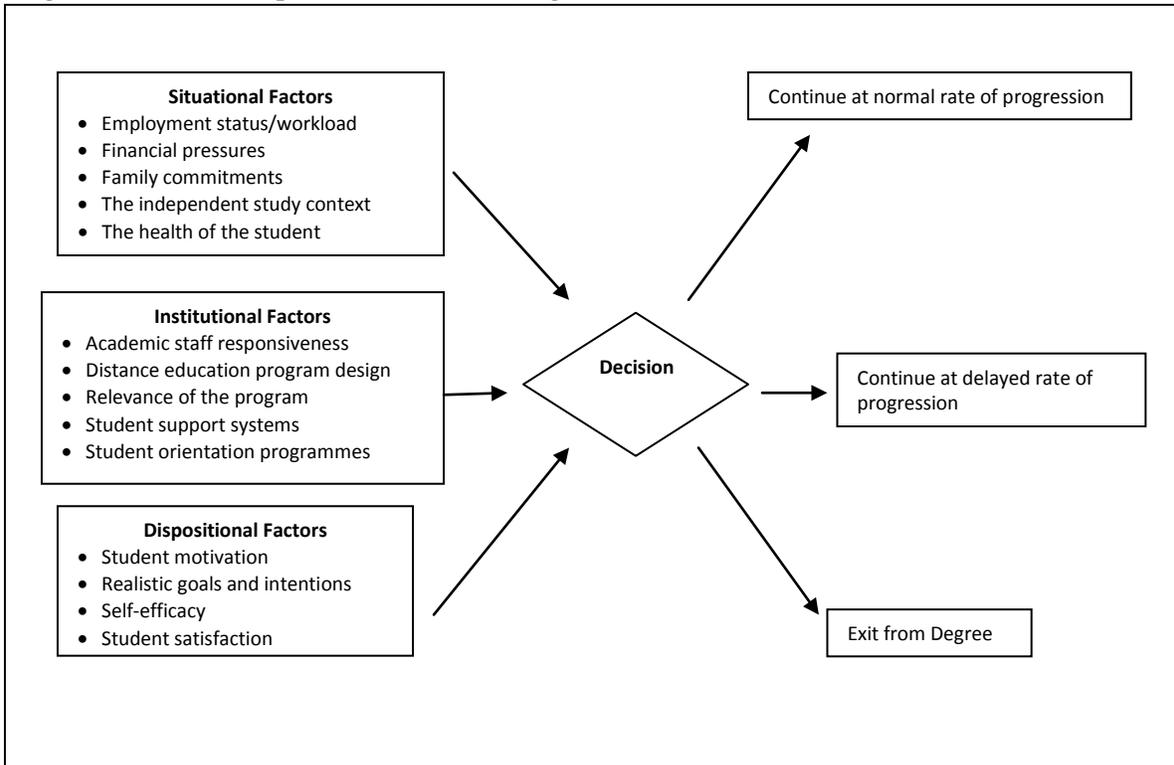
Carroll, Ng and Birch explain situational factors as those 'factors which arise from the student's particular life circumstances, such as the need to spend time with family, care for dependents and undertake work responsibilities' (2009, p. 198). Situational factors are an important aspect of student attrition and retention. As Carroll, Ng and Birch (2009, p. 198) highlight:

Prior research ... has suggested that the majority of students who withdraw from tertiary education and subsequently re-enrol indicate that they originally withdrew from study due to situational reasons. This implies that once a student's situational issues were resolved they were free to re-enrol having no other predisposition that led them to be unsuccessful in their studies. This has important implications for retention management because, in spite of some situational factors being unavoidable, other barriers such as financial issues and lack of time may be able to be addressed by institutional interventions.

Institutional factors are then those factors 'that result from procedures, policies and structures of the educational institution that exclude or discourage working adults from participating in educational activities' (2009, p. 199). From an institutional perspective an understanding of these factors is important. Not only do they indicate where the institution itself may improve but at a program and course level may indicate where curriculum (re)design and course enhancements may improve retention. The third category in the framework is dispositional factors. Carroll, Ng and Birch (2009, p. 199)

explain dispositional factors in the following way; '[d]ispositional (or attitudinal) factors are individually and collectively held beliefs, values, attitudes or perceptions that may inhibit a person's participation in organized activities.' Situational factors, institutional factors and dispositional factors then become the categories under which specific factors can be collected. Within each of these factors Carroll, Ng and Birch (2009, p. 200) identified 14 factors that they suggest arise from the literature and represent their use of the framework graphically as in Figure 1 below:

Figure 1: Chain of Response model (Carroll, Ng & Birch)



The framework above was used by Carroll, Ng and Birch (2009, p. 197) in the context of examining the retention and progression of postgraduate students at a Regional Australian University 'where the majority of students undertake their studies by distance education'. They (2009, p. 200) used the framework to 'investigate the impact of these factors on the retention and progression of [these] students.' They suggest that the framework is not limited to evaluating a student's decision to exit from a program, but that the framework is useful to analyse whether particular (or different) factors may impact upon a student deciding not to withdraw from the program but to continue at a delayed rate of progression. Whilst their specific study examined the retention and progression of students studying at a distance at postgraduate level in a business program their study has a resonance with the project to investigate attrition from the Bachelor of Property. The Bachelor of Property is also delivered by distance education and as has

been shown there is a trend for mature-aged students to enrol in the program.

In addition to Carroll, Ng and Birch’s research, Yorke’s research into student attrition also provides a useful basis from which to consider the issue of retention and the factors and reasons that may be relevant to examine attrition in the student context. Yorke’s research, although conducted in 1999, still resonates today and the factors he identified as contributing to attrition are still applicable, particularly when the factors are considered in the context of the Chain of Response Model. Table 1 below lists the reasons why students did not persist with their studies arising from Yorke’s research:

Table1: Reasons for Attrition (Yorke)

<ul style="list-style-type: none"> • Chose wrong field of study • Lack of commitment to the programme • Financial problems • Programme not what I expected • Insufficient academic progress • Teaching did not suit me • Needed a break from education • Programme organization • Inadequate staff support outside timetable • Lack of personal support from staff • Quality of teaching • Programme not relevant to my career • Personal health problems • Difficulty of the programme • Stress related to the programme • Emotional difficulties with others • Workload too heavy • Lack of study skills • Institution not what I expected 	<ul style="list-style-type: none"> • Class sizes too large • Accommodation problems • Demands of employment whilst studying • Dislike of city/town • Needs of dependants • Lack of personal support from students • Travel difficulties • Lack of personal support from family • Timetabling did not suit • Homesickness • Institutional computing facilities • Fear of crime • Institutional provision of social facilities • Institutional library provision • Institutional provision of specialist equipment • Difficulty in making friends • Problems with drugs/alcohol
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Arguably these reasons can be incorporated into the framework proposed above by Carroll, Ng and Birch as the reasons fall into framework as either being situational, institutional or dispositional. This prior research provides solid framework upon which to build a research project to examine student attrition from the Bachelor of Property. This is particularly important as the next section will demonstrate that the Bachelor of Property has significant student attrition.

CQUNIVERSITY’S BACHELOR OF PROPERTY

CQUniversity’s Bachelor of Property is an undergraduate degree offered to domestic students to complete in either 3 years full-time or 6 years part-time study (CQUniversity 2010). CQUniversity first began offering the degree in 2005, so relatively speaking the

program is still in its infancy. The program is offered by distance education or, FLEX, mode only. The degree is accredited by the Australian Property Institute and requires the completion of 24 course or 144 units of credit. There is a requirement to complete 22 core courses, the remaining two courses to be electives chosen from any CQUniversity courses. Table 2 represents the courses within the program and the progression recommended so that any prerequisites and co-requisites are met.

Table 2: Bachelor of Property Program Outline

Year 1 - Term 1		Year 1 - Term 2	
ACCT11059	Using Accounting for Decision Making	BLAR11048	Construction 2
BLCN11033	Construction 1	HRMT11010	Organisational Behaviour
ECON11026	Principles of Economics	LAWS11030	Introductory and Contract Law
PROP11001	Property Valuation	STAT11048	Essential Statistics
Year 2 - Term 1		Year 2 - Term 2	
COIS11011	Foundations of Business Computing	BLAR11045	Built Environment 1
FINC19011	Business Finance	FINC19014	Property Investment and Finance
LAWS19035	Property Law	GEOG19021	Geographic Information Systems
MRKT11029	Marketing	PROP19001	Statutory Valuation
Year 3 - Term 1		Year 3 - Term 2	
ECON19036	Property Economics	BLAR13040	Building Life Cycle Maintenance
LAWS19038	Planning & Environment Law	BUSN19021	Project
PROP19003	Advanced Property Valuation	PROP19002	Property & Asset Management
Elective		Elective	

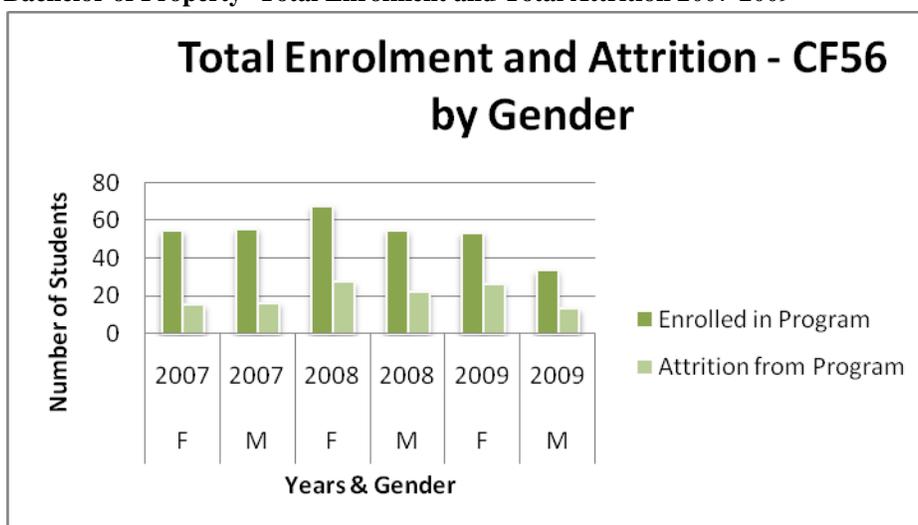
In terms of enrolment, in 2007: 109 students enrolled, in 2008: 121 students enrolled and in 2009: 86 students enrolled into the program. However, student attrition from the program is significant. In 2007 of the 109 students that commenced 31 of those students exited the program after year 1. This is an attrition rate of 28.49%. Of the 121 students that commenced in the program in 2008, 49 of those students exited the program after year 1: an attrition rate of 40.4%. In 2009 of the 86 students that commenced the program 39 students exited at the end year 1. The attrition rate in 2009 was a staggering 45%. Table 3 illustrates this loss as compared to enrolment.

Table 3: Bachelor of Property - Enrolment and Attrition (Numbers of Students) 2007-2009

Year of Enrolment	Enrolment	Attrition	Percentage Attrition
2007	109	31	28.49%
2008	121	49	40.4%
2009	86	39	45%

The University’s Academic Data Dashboard allows closer quantitative examination of the students particularly with respect to gender and age. Table 4 indicates enrolment into the program attrition and attrition from the program by gender for the years 2007-2009.

Table 4: Bachelor of Property- Total Enrolment and Total Attrition 2007-2009



An initial analysis of the data based on gender yields some interesting results. For example in 2007 of the 109 students enrolled in the program 54 (49.5%) students were female while 55 (50.5%) students were male. In 2008 of the 121 students enrolled, the majority of enrolling students (67, 55%) were female. In 2009 that trend was replicated with 53 (61.6%) of the 86 enrolling students being female and 33 (38.4%) male. The data with respect to gender can be explored further, particularly in terms of attrition. In particular the data allows a hypothesis with respect to gender to be tested: *Female enrolling students will be more likely to exit from the program after the first year than male enrolling students.* Interestingly, using the independent variable of gender (male/female) on the attrition data no statistically significant difference was revealed. Table 5 presents the results of the crosstabulation which suggests that gender, of itself, is not a factor which contributed to attrition from the program.

Table 5: Gender and Attrition Crosstabulation

Variable	Counts	Attrition		Difference
Gender		2007		$\chi^2 (1, N=109) = 0.486, < 3.84$ No significant difference between participants. Null hypothesis of no difference not rejected.
		Yes	No	
Male (N=55)	Count	14	41	
	Expected	15.6	39.4	
Female (N=54)	Count	17	37	
	Expected	15.4	38.6	
Gender		2008		
		Yes	No	
Male (N=54)	Count	22	32	
	Expected	21.9	32.1	
Female (N=67)	Count	27	40	
	Expected	27.1	39.9	
Gender		2009		
		Yes	No	
Male (N=33)	Count	13	20	
	Expected	15	18	
Female (N=53)	Count	26	27	
	Expected	24	29	

A similar analysis can be undertaken with respect to the age of students exiting from the program. The research question in this context then becomes one of whether age is a factor which contributes to attrition. The initial analysis reveals that “older” rather than “younger” students entered into the Bachelor of Property during 2007, 2008 and 2009. For example, in 2007 of the 109 students enrolled in the program 18 (16.5%) students were under 20, 49 (45%) students were aged between 20 and 29 years of age, 25 (22.9%) students were aged between 30 and 39, 13 (11.9%) students were aged between 40 and 49, and 4 (3.7%) students were aged 50 or over. Similarly in 2008, 19 (15.7 %) students were under 20, 55 (44.5%) students were aged between 20 and 29 years of age, 26 (21.5%) students were aged between 30 and 39, 18 (14.9%) students were aged between 40 and 49, and 3 (2.5%) students were aged 50 or over. In 2009, 10 (11.6%) students were under 20, 41 (47.7%) students were aged between 20 and 29 years of age, 24 (27.9%) students were aged between 30 and 39, 7 (4.7%) students were aged between 40 and 49, and 4 (3.7%) students were aged 50 or over. Table 6 indicates entry into the program attrition and attrition from the program by age for the years 2007- 2009.

Table 6: Bachelor of Property-Student Ages 2007-2009

By Age Group	Enrolled in Program	Attrition from Program		% Attrition Within Age Group
2007	109	31		
< 20	18	0	0%	0%
20 -29	49	11	35.5%	22.44%
30 – 39	25	10	32.3%	40%
40 – 49	13	6	19.3%	45.15%
50+	4	4	12.9%	100%
2008	121	49		
< 20	19	1	2%	0.052%
20 -29	55	25	51%	45.45%
30 – 39	26	13	26.5%	50%
40 – 49	18	8	16.3%	44.44%
50+	3	2	4.1%	66.6%
2009	86	39		
< 20	10	0	0%	0%
20 -29	41	19	48.7	46.3
30 – 39	24	14	28.5	58.3
40 – 49	7	5	12.8	71.4
50+	4	1	2.56	25%
Grand Total	316	119		

As with the data on gender, the data on age can be explored further to determine whether age may be factor which tends towards a student not continuing with the Bachelor of Property. In particular the data allows the hypothesis: *“Older” students would be more likely to exit from the program after the first year than students in the < 20 age group.* Interestingly, using the variable of age, the attrition data revealed that there were statistically significant differences between students who exited the program based upon their age. This analysis then suggests that a student entering study as a mature-age student may be more likely to exit the program more than a “younger” student. Table 7 demonstrates the results of the crosstabulation.

Table 7: Age and Attrition Crosstabulation

Variable	Counts	Attrition		Difference	
Age		2007			
		Yes	No		
< 20 (N=18)	Count	0	18	$\chi^2 (4, N=109) = 21.728, > 9.49$ Significant difference: "Older" students exited more than was expected. Students aged < 20 did not exit the program as was expected.	
	Expected	5.1	12.9		
20-29 (N=11)	Count	11	38		
	Expected	13.9	35.1		
30-39 (N=10)	Count	10	15		
	Expected	7.1	17.9		
40-49 (N=5)	Count	6	7		
	Expected	3.7	9.3		
50+ (N=5)	Count	4	0		
	Expected	1.1	2.9		
Age		2008			
		Yes	No		
< 20 (N=19)	Count	1	18	$\chi^2 (4, N=121) = 12.293, > 9.49$ Significant difference: "Older" students exited more than was expected. Students aged < 20 did not exit the program as was expected.	
	Expected	7.7	11.3		
20-29 (N=55)	Count	25	30		
	Expected	22.3	32.7		
30-39 (N=26)	Count	13	13		
	Expected	10.5	15.5		
40-49 (N=18)	Count	8	10		
	Expected	7.3	10.7		
50+ (N=3)	Count	2	1		
	Expected	1.2	1.8		
Age		2009			
		Yes	No		
< 20 (N=10)	Count	0	10	$\chi^2 (4, N=86) = 12.536, > 9.49$ Significant difference: "Older" students exited more than was expected. Students aged < 20 did not exit the program as was expected.	
	Expected	4.5	5.5		
20-29 (N=41)	Count	19	22		
	Expected	18.6	22.4		
30-39 (N=24)	Count	14	10		
	Expected	10.9	13.1		
40-49 (N=7)	Count	5	2		
	Expected	3.2	3.8		
50+ (N=4)	Count	1	3		
	Expected	1.8	2.2		

Obviously this data and the analysis it provides is limited in that it does not explain or give an indication as to the reasons why a particular student exited the program. The data does show the diversity of students in the program and that age may be a relevant factor contribution to student attrition from the Bachelor of Property. Whilst the data may identify age as a factor, the quantitative data is limited to this assertion. The data takes the matter no further in terms of informing those involved in the program or the institution of what measures should or might be adopted to reduce student attrition from the program. Given the significant nature of student attrition and its cost the University and the property profession exploration as to the reasons given by students for leaving the program was considered important.

THE RESEARCH PROJECT

Design of the Project

Given that the aim of the research is to reveal the reasons students may have had for exiting from the Bachelor of Property the research has to be exploratory in nature (Babbie, 2004). The research must necessarily proceed as an exploratory study as insight into the factors which led to student attrition from the program need to be identified and explored (Babbie, 2004). The methods to be adopted to gather data will be a survey, interviews and institutional and program-specific document analysis. The combination of these methods is appropriate to this type of research as the information can be triangulated and supported from different sources (Babbie, 2004). A further benefit is that the data collected can be both quantitative and qualitative so as to improve the validity of the outcomes (Payne & Payne, 2004; Hartas 2010). The survey will be sent by mail to those students identified by CQUniversity's Academic Data Dashboard as having exited from the program. Students completing the survey will also be offered the opportunity to participate in an interview to further elaborate on matters which may have affected their attrition from the program. Participation in the interview will enable further qualitative data to be obtained (Babbie, 2004). The document analysis with respect to the program will serve as a reference point from which the structure of the program, discipline content and issues concerning curriculum design can be examined (Robinson, 2010).

In terms of the survey questions, the survey questions were developed using and combining the factors identified and used by Carrol, Ng and Birch (2009) through the Chain of Response Model (Cross, 1981) and factors identified by Yorke (1999). In other words the survey developed has not limited itself to the 14 factors identified by Carroll, Ng and Birch. The survey will utilise those 14 factors and some of the factors identified by Yorke to create a list of 37 factors for examination. Approval to conduct the research has been lodged with CQUniversity's Human Ethics Research Committee and will be

funded by the Faculty of Arts Business Informatics and Education.

The Survey Questions

The survey will ask students to consider a list of reasons provided and indicate the significance of those reasons for their decision to leave the Bachelor of Property. A 5-scale Likert scale is provided with “1” being not at all significant and “5” being very significant. A Likert scale is useful in this context as it is designed to ‘determine the relative intensity of different items.’ (Babbie, 2004, p. 169). Additionally, Likert scales are appropriate for use in education research (Hartas, 2010). The factors fall under with situational, institutional and dispositional factors as represented in Table 8 below:

Table 8: Survey Areas to Consider

Situational Factors	Institutional Factors	Dispositional Factors
<ul style="list-style-type: none"> • Employment workload • Change of employment • Change of employment conditions • Financial pressures • Family commitments • Personal commitments • Personal health issues • Family health issues • Enrolled in too many subjects • Bachelor of Property wrong field of study • Lack of personal support from my family to study • Difficulty making contact with other students 	<ul style="list-style-type: none"> • Academic staff not responsive to personal needs • Academic staff not responsive to academic needs • Course design • Program design • Program planning/completion difficulties • Unavailability of University Student Support Systems • Absence of student orientation programs • I was making insufficient academic progress • The teaching did not suit me • The courses were more difficult than I expected • The University was not what I expected • The timetabling did not suit • The University’s computing facilities were not sufficient • The University’s library materials/support was not sufficient • The University did not provide access to the necessary specialist equipment 	<ul style="list-style-type: none"> • Loss of Motivation to study • Change of personal intentions/goals • Change of professional intentions/goals • Unrealistic personal expectations of tertiary study • Lack of personal satisfaction with tertiary study • Lack of personal satisfaction with courses • I decided I needed a break from education • I did not have sufficient personal study skills • Isolation of studying • Not enough time to study • I found the course workload too heavy

An obvious limitation with conducting this research is that any findings will not be generalisable either across the institution or to other institutions due to the nature of the research design and its focus on the Bachelor of Property and a student's particular experience of that program. As Babbie (2004, p. 89), '[t]he reason exploratory studies are seldom definite in themselves has to do with representativeness; that is, the people you study in your exploratory research may not be typical of the larger population. Notwithstanding this limitation, the research is of importance to the program. As argued earlier there is a need to understand the factors of attrition so that changes can be made and the program is seen to be contributing to the institutions achievement of its strategic goals.

Conclusion

Student attrition is a serious issue that all universities in Australia wrestle with. It is not only the economic costs (to the university) that are enormous but also the human, intellectual and social capital losses to the property profession which are incurred when a student exits from tertiary study. It is projects like the one described here, that although small and focussed on one program only, will help contribute to the debate and to understand how people are seeking out learning opportunities and in ways that suit them. An understanding of what the institution itself and property educators who are in contact with students may be able to do to assist students whether the reasons for attrition are institutional, situational or dispositional is of vital importance. As an introductory piece of work this paper seeks to start that understanding.

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