STEPS toward Retention: a case study

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The success of CQU's STEPS (Skills for Tertiary Education Preparatory Studies) pre-university preparatory program suggests its potential benefit as a safety net for at-risk undergraduate students. Unable to manage what the mainstream learning environment requires, students can defer their program and participate in STEPS to address their academic under-preparedness. This paper presents findings from semi-structured interviews with three at-risk undergraduate students who availed themselves of the STEPS option. Student reflections indicate the value of STEPS in providing an opportunity to acquire more highly developed academic skills and greater resilience prior to resuming their initial study. This research gives voice to the proposal that STEPS become a recognised CQU undergraduate retention strategy.

Introduction

By its very nature, any university undergraduate arena asks much of first year students. Tinto (1993) suggests that students who enrol in tertiary study leave their culture of origin to enter a very different culture, that of academia. Apart from 'academic' preparedness, undergraduate study requires of students a certain ability to manage 'personal', non-academic factors which at times can have a debilitating effect on success. For many first year students, adaptation to this new and quite foreign learning environment comes easily. On entry, they possess the academic and personal management skills to cope with tertiary study and they manage to gain a clear understanding of what the undergraduate learning environment asks of them. These students enter university with cognisance of their own ability, motivation, goals and future study demands and generally gain the expected positive outcomes. Unfortunately, for a substantial minority of students, this experience is less than fulfilling and in many cases can be uncomfortably confronting as it uncovers their inability to cope within this new academic culture. The common factor in both scenarios is the degree of preparedness evident in each cohort of students.

Under-preparedness in this context may be defined as students' lack of the necessary academic skills and personal understanding of the academic culture to successfully complete the first year of study. A number of students who exit undergraduate study prematurely, indicate they were not successful in their attempt to integrate into this new culture and that the undergraduate learning environment was not only foreign to them but also extremely daunting. (M. Palu, Student Counsellor, personal communication, November 23, 2007). Within at most one academic term, some of these under-prepared students recognise various factors have them ill-equipped to reach their graduation goal. Aside from those who choose to abandon their study totally, a small group seek advice on their options and still others drift in and out of undergraduate study, delaying graduation with academic fails, and long periods of non re-

enrolment. Such is the attrition pathway for some students and such is the dilemma for universities as they contend with academically and personally under-prepared students.

The success of the STEPS (Skills for Tertiary Education Preparatory Studies) program as a recruitment and articulation tool over its twenty-year history at Central Queensland University suggests it may be beneficial as an option for undergraduate students who at some stage in their initial study realise they are under-prepared and ill-equipped to succeed. Unable to successfully manage what the mainstream learning environment asks of them, they can literally defer their study, participate in STEPS to address their academic and personal under-preparedness and return to undergraduate study more prepared to meet the challenge of study.

This paper considers a number of factors that impact on a decision to use a preparatory program such as STEPS as an undergraduate retention strategy. It highlights the nature of the current university environment that drives the need for a preparatory program to even be considered as an option for students who have entered by the traditional pathway. It explores why STEPS has already offered hope to a small number of at risk students who have deferred their undergraduate study to later participate in STEPS, thereby addressing their under-preparedness for tertiary study.

The reality for universities and students

Government has sought to increase the opportunities for diverse populations to access higher education (DEST, 2006). As such, prospective students now have the privilege of numerous entry pathways, each providing an opportunity to embark on study with varying degrees of preparedness. Simultaneously, the Federal Government has through funding entitlements exerted pressure on universities to reduce student attrition (McInnis, 2001). No longer does the current university model fit the needs of a growing percentage of a very diverse first year student body whose members are increasingly at risk of becoming an attrition statistic.

Transition to university requires major adjustments whereby students are expected to assimilate into a new culture characterised by instructional methods quite divorced from previous educational experiences.   Transition difficulties are notable and stem from a variety of issues including poor study skills, a lack of academic preparedness and unrealistic expectations of self and the tertiary process. The growing number of students who bring these issues to their first year experience, reflects a cohort who are entering tertiary studies after having left school some time ago, with little or no further academic experience. In many cases, expectations of the university culture do not mirror reality and subsequently result in considerable anxiety for some students (Beder, 1997). In addition, some students fail to make the necessary adjustments and exit the tertiary system prematurely, but not permanently. A review of Australian tertiary attrition rates for the years 1994 to 2002 found that first year attrition was more than twenty percent; double the percentage for second year students (DEST, 2004). Further, it indicates students under the age of 21 have less than an eighteen percent attrition rate compared to their older counterparts with attrition climbing to almost thirty four percent for the over 25 year group. This problem is further compounded by the fact that currently in Australia, approximately half of the students entering university are mature aged (McInnis, 2001). Even though there has been some criticism of McInnis' data, his research points to the need for more overt attention to be afforded the first year experience as it relates to the identified at-risk cohort of students.

Krause, Hartley, James and McInnis (2005) highlight a number of precipitating reasons for attrition, of which three are of particular relevance to this study - poor academic achievements, low motivation and minimal staff-student interaction. To exacerbate this situation, anxiety, extrinsic motivation and external demands create at times insurmountable odds for a student who 'goes it alone'. A significant finding in Krause et al's (2005) research was that approximately thirty percent of students thought they were under-prepared to select a course to meet their needs. These researchers amongst others, point to the need to consider the degree of preparedness of the student as being a crucial factor in their long term academic success. Those students who are under-prepared for the onslaught and rigours of academia can discover first year university study to be overwhelming and unsustainable.

Recent research into first year attrition at 14 Australian universities (Long, Ferrier & Heagney, 2006) indicates the percentage of students exiting undergraduate study completely without intention to re-enrol at a later date could be less than ten percent. Long et al. found twenty percent of the 2004 cohort had withdrawn from their course by the beginning of 2005; however, only twelve percent had not reenrolled in another course or another university by mid-2005. The reasons for withdrawal cited by students include problems balancing home, work and study, under-preparedness for university life including difficulties with academic success; isolation, loneliness, and study anxiety. The withdrawn cohort consisted mainly of older, low socioeconomic, rural, and independent individuals from English speaking backgrounds. These findings, while supporting other previous research into attrition from university, suggest some students withdraw with the intention of continuing at a later date.

What universities and students can do

Various models are utilised to assist with the transition into university and they focus on the issue of academic preparedness with varying emphases and degrees of success. They include models with generic skills integrated into discipline courses, specific foundation courses, separate preparatory programs encompassing generic skills and those focusing on specific discipline areas, individual assistance, drop-in centres and peer support and orientation programs which attempt to cover social and academic integration. In Australia learning assistance is not seen as an integral part of a student's life (Peach, 2005). Seidman (as cited in Simpson, 2005) suggests retention equals early identification of vulnerable students plus early and continuous intervention. Simpson also implies that while improvements in teaching are always a valuable aim for any educational tuition, intervention for the struggling student is the solution to reduce attrition. However, student outcomes have become an essential focus for universities as they compete for a slice of the student market and learning assistance awaits the global recognition of its capacity to assist in this area. When students such as those who are the focus of this paper undertook the STEPS program, they inspired the authors to question the worth of preparatory programs such as STEPS, as potential retention strategies which could fill the void of under-preparedness for tertiary studies and assist them with low motivation. Subsequent to the completion of STEPS, such students are retained in the system to complete their undergraduate degree.

Although many universities have learning support for students 'at risk', there is little evidence of university support for students to defer first year studies while they focus on gaining skills necessary for success. This paper suggests there is a lack of programs nationally which target students who fail midstream. One such exception is a Murdoch University course commencing week five to allow potentially at-risk first year students time to recognise their weaknesses and the need for learning assistance. The course aims to assist students acquire

necessary academic skills and to gain knowledge of themselves as learners (Murdoch Handbook, 2008). Central Queensland University has adopted a proactive/reactive stance to its attrition history through the Monitoring Academic Progress (MAP) policy. Research into students' academic progress as part of the MAP process suggests the majority of students who are not succeeding have unrealistic expectations regarding what is achievable and are also extrinsically motivated. The research also revealed seventy percent of the MAP students interviewed indicated a commitment to complete their studies (Agar-Wilson, McKavanagh & Clifford, 2005) which demonstrates the majority of these students, while failing for a variety of reasons, still have the desire to complete their degree. Also, a small number of at-risk CQU students have, of their own volition sought enrolment in STEPS after exiting mainstream study in an attempt to address what they recognized as their state of under-preparedness for tertiary study.

The Phenomena of STEPS

As a pre-undergraduate preparatory program STEPS empowers students from socially, economically and educationally disadvantaged backgrounds to eliminate the barriers that locate them outside of the tertiary sector and to reach their educational potential. It embeds the belief that with self-motivation, commitment and perseverance, students can become independent, self-directed and successful learners at the tertiary level. There are countless inspiring stories that could be related about a preparatory program that not only prepares students academically for tertiary study but is truly transformational. The holistic curriculum combines with a student-centred approach to address the intellectual, social and emotional dimensions of learning. As such, students not only learn to write an academic essay, develop basic mathematics and computer skills, and acquire a heightened awareness of university life, they also discover the value of enduring the challenges that further learning and self discovery pose and in doing so are capable of discarding the habits of mind that once held them back. To date, records kept by CQU's Analysis and Planning Unit indicate STEPS has facilitated a changed life through 'second-chance' education for in excess of four thousand students.

Twenty-one years of existence has seen STEPS grow from a little known preparatory program to what is now a well known, highly respected and very sought after program. This growth in popularity may be attributed not only to the success of STEPS graduates in subsequent undergraduate study but also to the growing belief within the CQU community that the program provides a solid preparation for students who do not possess the necessary qualifications to enter tertiary study in the conventional manner. In the majority of cases, prospective students, when asked why they applied to STEPS, relay it was on recommendation by past STEPS students who attributed their first term/year study success to their STEPS experience. Many prospective students are more often citing a recommendation by course lecturers at CQU who, when contacted by these students about entry options, held STEPS up as the ideal entry pathway for those who lack the pre-requisite skill and knowledge the new university culture demands.

STEPS, comprising of four core preparatory courses: Language and Learning, Transition Mathematics 1, Computing for Academic Assignment Writing and Tertiary Preparation Skills, and steeped in the principles of adult learning, transformative learning and positive psychology ensures a successful integration into the new and quite daunting academic culture. Graduates relay via formal course evaluations and through informal anecdotes each year that they feel 'ready to tackle' undergraduate study as they have acquired not only the necessary academic skills but also a clear understanding of what the academic culture requires. They

indicate the STEPS experience instills in them the skills, knowledge and confidence to be successful learners. Students' written reflections, captured at the end of the program point to the STEPS experience providing an inclusive learning environment and ensuring all students feel valued, safe and supported. This creates a sense of belongingness to the University which is an ideal mental attitude to take as first year students to the undergraduate arena.

The case study

Background

This paper reports some initial findings from the project *"Building Bridges: A pilot study to evaluate STEPS as a retention strategy for at-risk undergraduate students"*. The funded project sought to explore the reflections and perceptions of a small number of students on one campus who experienced the "phenomena of STEPS" midstream in their undergraduate study. The project investigates the efficacy of STEPS as a university wide supported intervention and retention strategy for mainstream at-risk students. It commences with the testimony of the students involved in this pilot study and will build on findings from future qualitative studies. If a currently successful preparatory program was to become attractive to under-prepared and ill-equipped mainstream students, what does the "phenomena of STEPS" offer these people? Why would completion of STEPS be seen as a way forward for these students given they had already completed a period of undergraduate study? Why not just cancel out of study or defer to improve, attitude, motivation, finances and preparedness? How is it that STEPS could be seen by these students as being part of their academic future with known outcomes – a way to return to undergraduate study and feel that they might become better prepared, academically and personally? This case study based on the responses to semi-structured interview questions from three of the four students who had enrolled internally into the STEPS program on a regional campus, seeks to progress answers to these questions.

Given that each of the researchers had been associated on the same campus with the STEPS program or with university Support Services for a number of years, it would have been easy for them to speculate on the characteristics of those students who might choose to undertake STEPS in this way and why they would make such decisions. However, it was decided that this data should be gathered from the students themselves and presented using a case study. In a semi-structured taped interview, each participant was asked to reflect on their previous experiences in the STEPS program. In terms of their learning journey, these students had exited undergraduate study, were post-STEPS and had returned to undergraduate study as internally-enrolled regional campus students. Had these students seen STEPS in the same way as it was currently offered in the university, as a useful preparatory program or was there something else about the program that increased its profile of attractiveness? Other interesting issues explored in the interview questions included the unique situation of each of the undergraduate mainstream students who chose STEPS and an initial identification of the complex factors that influenced their decision to 'opt out' of undergraduate study and subsequently enrol in and complete STEPS as opposed to pursuing other options. Each participant was prompted by a series of questions sequenced to mirror the key decision-making phases of their academic journey up to the point of the interview. In particular, the questions sought to enquire about aspects of their learning journey as they transitioned to university, participated in STEPS and subsequently reflected on their successes or otherwise, post-STEPS.

The transition to university

The three students, named Marion, Paul and Helen, took different paths to university; however, all realised part-way during their study that they were ill-equipped for what the university culture asked of them. Of the three, Marion's path could be considered the most complex. Unfinished schooling, a variety of jobs, night school, a failed attempt at agricultural college, personal problems and a changed living arrangement had Marion begin undergraduate study at a regional university as a mature-aged student. Marion had commenced a farm management course but did not enjoy it, did not want to be there and subsequently was unsuccessful. On the other-hand, Paul and Helen, possessing good OP's, entered university direct from high school. Paul and Marion attempted study at other institutions but Helen came directly to the campus where she completed two years of a multimedia degree. *"...I went straight from high school to university and it was sort of something I think at the time my parents really expected me to go straight out and into university...but I found that maybe I didn't have enough information on the actual program before I started and I wasn't really ready to settle down into full time study."*

Paul had previously studied at a city university and within six months had withdrawn and returned home. Paul summed up his initial experiences of university study: *"...when I lived in Brisbane it was very hard because it was my first time out of home. I had stresses having to have enough work to pay rent and stuff like that so when I did make it to lectures I found them a little bit overwhelming because in Brisbane it was like every lecture theatre had 800 plus students in it for everything so there was no personal one-on-one communication which made it very, very difficult for me."*

Opting out - a crucial decision-making phase

Marion and Paul both exited from their university study with the view that work would solve their problems. Marion felt her problems stemmed from not having the prerequisite skills and from having to travel some distance to class most days. For her, the pressure was as much financial as it was academic. Marion's experiences led her to believe she needed to return to work to build her finances so she deferred her study for three years. *"Because of my learning difficulties, I started out to do four [courses] but dropped down to three. I dropped the Maths first...middle way through the first semester I dropped two of the courses which was Biology and Chemistry and retained the Physiology because I only needed to go one day a week."*

Paul thought his problems stemmed from university being so different from the school environment where he was a successful student with *"subject prizes"* and *"HD's for Chemistry"*. *"Well I got a couple of fails and you know it takes away I guess your motivation when you are failing like that...Eventually I went – ah I'll drop out, I'll get a good job, I might be able to do some sort of certificate at TAFE or some sort of on-the-job training so I went – university obviously isn't for me at the moment so I dropped out."*

For Helen, failing or passing was not the issue as her results were in the Credit to High Distinction range ; however, she felt she was not achieving her best and started questioning why she was at university, *"...I think I had the required skills but I didn't have much of the knowledge of what university was going to be like. Like I know I had the skill there when it came to academia but when it came to what you would need to get through it everyday and what it was going to be like and what it was all about, I didn't really have a grasp of that."*

Reflecting on STEPS

In Paul's case, he was three years from university study before the opportunity for STEPS arose. During this time, his inactivity as a student was in complete contrast to his paid employment history. In the latter part of this period he contemplated courses at TAFE and was offered jobs away from home. He sums up his first glimpse of STEPS: *"Two people I had talked to about STEPS – didn't know them from a bar of soap but they'd come up and said to me you know when I started talking about it - you could see how happy they were they had done it and they sort of had a future plan now and that like I was working for three years in a 24 hour store that was the dodgiest place in ...and the future was looking rather bleak so I needed to do something and the more I heard about it, the more I went – well this might not be too bad...one of my friends LH had also decided that she was enrolling that year and L and I sort of made a pact together and said - well let's do it and see how we go – it can't be any worse than what we doing now cause she dropped out of university as well."*

As a past STEPS student himself, Helen's brother recommended the program to her. *"He said that he would recommend it to anybody that was in high school or had just gotten out of high school or anyone who just wanted a change even if they didn't intend doing university afterwards, it's a great way to focus on their skills, to find what they want to do, what they are good at and what they are interested in so that is why I decided to do STEPS".*

Marion's work, while replenishing her finances did not fulfil her need to complete her university study and her desire to return; however, utmost on her mind was to return with better skills. When asked about why she decided to participate in STEPS, Marion replied, *"Like I said, I think it would have prepared me to attend and just ease me back into study after going back to work and working and things like that. I just didn't want to dive into the swimming pool. A lot of people gave STEPS a very good rap...and it seemed like a good thing to do."*

Completing STEPS

All three students chose the full time 12 week STEPS program, the equivalent of a university term and successfully completed all four component courses. Marion and Paul wished to replicate the experience of full-time undergraduate study, *"...it would give me an idea whether I could do four courses so I really wanted to put myself at uni in the same conditions that I would be under". "If I did it part-time, it might take me a bit more to get back into university workload so I did the twelve weeks fulltime and it was good because it kept me thinking all the time and helped me get through it a lot better..."(M).*

Helen chose the full time program as she wanted to time her re-entry to university in such a way that she could complete STEPS and follow immediately with undergraduate study. *"I chose to do the accelerated because I did not think I would struggle with the material at all because I was still quite actively involved in my own education especially with traineeships I was still writing out essays and whatnot for that and I didn't want to have to wait until the following year because then I would have had to do the extended I imagine."*

The three students recorded pleasing results in all component courses. Marion scored results from Credit to High Distinction, Helen was very successful, with three High Distinctions and one Distinction, and Paul achieved commendable results, posting all High Distinctions.

Post-STEPS

When questioned about what facilitated their success in STEPS, Marion cited the support and encouragement through the development of 'the group' and from the staff, *"…when I did the science, it was very lonely, very different. In STEPS you were more a group, you associated with people a lot more…You had support from your peers as well as the lecturers so that was good.".*

Helen and Paul's responses were similar; *"I think that my learning temperament meant that I had to have interaction and that worked really well for me and I also had a great environment with the other students wanting to push each other as well, wanting to give support to everyone that was there. I believe that and the lecturers that we actually had who encouraged us everyday would have been what I sort of strived on" (H). "Well the first benefit I've got to have is the group I was with. They were excellent. Well I think that everybody who has done STEPS has gone, 'well the people there were great" (P).*

Paul commented on the changes to self that the program promoted. Helen learnt how to appreciate and work with others and how to reflect upon her abilities and focus to improve those skills that were in need of attention. *"If you take away my whole academic life since and just look at my personal life, well without STEPS I probably would have been a miserable old grouchy sort of person because that's the way I was going…since then my personal life has been a lot more positive and I have had a brighter outlook and that's basically because STEPS gave you an option. You don't have to be stuck where you are. With STEPS you've got an option to do something. "It was something that I needed to improve on – I'd always been quite good at working individually but not so good in group work and that is something through STEPS I've really developed …It showed me how to work with them." (P)*

"It sort of showed it was alright not to have confidence in certain places and how to hone those skills so that you can become more acceptable of yourself as well, accepting of what you capabilities are." (H)

Marion's writing improved due to the emphasis in STEPS on generic writing skills. Her confidence levels also improved: *"I thought I would be able to do the essays and I had the confidence."* Marion summed up undergraduate study and the need to be prepared: *I say it is very full on…You just don't have time, you just don't have a life…and if you are leaving things to chance and you have not done STEPS and you are just doing things, some people can just muck up but I think they get a big surprise because it is not that easy. They really need to be well prepared."*

Recommendations from the interviews

Expectations that students will be both adequately motivated and academically prepared as they enrol in university presents a number of issues for both the institution and the individual student. Widening access to university has provided more opportunities for individuals to begin study however not necessarily with adequate preparation. If the student is under-prepared, opportunities can rapidly disintegrate, disillusioning the individual and generating a loss for all stakeholders. This paper suggests that institutions can still do more to meet the needs of a diverse student population, some of whom if more adequately prepared and more university aware, would not be so challenged by the new and foreign academic culture.

For all three researched students, who acknowledged they were challenged by this new culture, it was "word of mouth" that led them to consider STEPS as being what they needed to 'keep their dream alive'. They highlighted areas of their undergraduate study that were particularly challenging, pointing particularly to a lack of recognition of students' learning needs within some undergraduate courses and their lack of awareness of how the university system worked. Each saw STEPS as a way to 'sharpen their skills', recognising that to be successful required 'something more' than what they presently had. In particular, Helen wanted time to reassess her university destination, Paul wanted a 'clean start' and Marion wanted to ease herself back into study and bridge the gap in skills. Support within STEPS was singled out as a strong attributing factor to overall success, both in the STEPS program and in subsequent undergraduate study. The students also pointed to aspects of self that changed because of the program: aspects such as confidence; skills in certain areas; the ability to work with others; and changes to one's outlook on life because options were now made available. All three held STEPS up as a program that addressed their issues of under-preparedness. For them, STEPS facilitated the acquisition of academic skills not already possessed, the enculturation of self belief not previously engrained, and the establishment of a supportive learning environment not previously experienced. All such aspects are cited as major contributors to student attrition from higher education in the existing body of literature.

From this study, it is reasonable to suggest that undergraduate students seek out and benefit from a learner centred approach whereby teaching quality is high, flexible approaches to learner diversity exists, processes and systems are 'demystified' so that students feel more 'in tune' with university expectations and a supportive learning community is established. STEPS is founded on such characteristics so it stands soundly as yet one more retention strategy that could prove worthwhile for formal adoption at CQU.

Limitations and conclusions

While the target group in this pilot study was small it was thought they would become just the first of a growing group of students across the university who might voluntarily choose to defer their study seeking an alternative academic path to up-skill in order to complete their degree. The researchers acknowledge the limitations of the study with its access to only those students who had chosen to do STEPS; a small number of potential participants. The future for this research revolves around a continuation of this project to grow the body of knowledge by accessing and interviewing more students completing STEPS midstream in their study. By proposing that STEPS be an integral part of the MAP process within CQU would be one way for this to occur. To help build a more balanced viewpoint regarding the potential for offering of STEPS to at- risk students it may be possible to also include interviews with students who defer then return to undergraduate study not having completed STEPS.

It is also noted that a more structured inquiry of the interview data using qualitative research software would be beneficial along with the possibility of using a grounded theory approach to interpret that data. As the sample group grows over a longer period of study, it is hoped the complex factors that impact on under-prepared mainstream students and the reasons behind their decision-making regarding their academic future will be identified. A more accurate picture of the potential efficacy of STEPS as a retention strategy may result. This knowledge along with a larger sample will help lay a stronger foundation for generalising from current and future data collected, adding to the substantive body of knowledge on retention strategies for at-risk undergraduate students. The development of any theory drawing on the themes identified and the complex factors of attrition and retention of at-risk students will be an

ongoing task over a longer period. The research may also contribute a perspective on what attributes may be considered desirable for success on entry to university. As further studies are completed and actioned, tertiary education can rise to the challenge of a changing student demand and provide necessary support while retaining high standards.

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