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University-based enabling program outcomes: comparing distance education and internal study

Cheryl Bookallil
John Rolfe

Central Queensland University

Enrolment in university enabling programs has expanded dramatically in the last decade as universities strive to increase enrolments, particularly of students from low socioeconomic backgrounds. Offering enabling study by distance education has been part of this expansion with the benefit of providing access to a wider enrolment base. The purpose of this study was to compare enabling program completions and articulations to undergraduate study as well as student academic performance between those students who undertook enabling by internal mode and those who opted for distance education. Archival data from the host university student records system was extracted covering the time period from 2001 to 2011. Statistical analysis found significant differences existed in both course completion and articulation for students enrolled in online learning versus face-to-face teaching. Analysis also revealed academic achievement in the enabling programs, as measured by Grade point Average (GPA), to be higher among internal students compared to distance students.

Keywords: *University enabling programs; distance education; attrition; completion; articulation; grade point average*

Introduction

Enabling programs at Australian universities are known by many different titles such as 'Bridging Courses', 'Foundation Studies', 'Tertiary Preparation' as well as the definitive title of 'Enabling Programs' (HE Support Act 2012: 302). Regardless of name these programs share the common objective of providing second-chance learners with a pathway for entry to undergraduate study. Such programs have the potential to reverse the inequality lamented by Jones (2009:1) where he asserted "…patterns of inequality entrench themselves in society, reinforcing themselves across generations and skewing people's life chances".

As at February 2013 there were 35 Australian universities offering enabling education (Hodges, et al., 2013). These programs serve an important role in delivering equity in access to higher education for people from disadvantaged groups (Willans & Seary, 2011; Miyamoto, 2005; Ross & Gray, 2005) by providing the requisites for entry to university study for people whose education has been disrupted.

Higher levels of education and labour market credentials can generate positive spill over effects for the economy. This is a reason governments choose to subsidise education, including the cost of university enabling programs, considering them to be 'Merit Goods' that might otherwise be under consumed (Musgrave, 1959). Australian Universities have received specific funding for enabling programs under the Commonwealth 'Enabling Loading' since 2005. A benefit to the university supplying the enabling is a potential increase in undergraduate enrolments.

The Australian government's definition of an enabling program is to enable "…the person to undertake a course leading to a higher education award…" (HE Support Act 2012: 302). Therefore, enabling programs can be considered as an intermediate good assisting in the achievement of targets recommended by the Bradley Review of Higher Education (Bradley, et. al., 2008). Intermediate goods are inputs into the production of final goods or services (Krugman & Wells, 2013). In this sense success of an enabling program could be considered as completion of enabling and articulation into university level study.

Enrolments in enabling programs expanded by 180% between 1989 and 1999 (Ramsay, 2008), with more universities offering enabling and enrolment by distance education further expanding the student numbers. However, there has been little evaluation of their effectiveness. In their final report on the higher education base funding review, Lomax-Smith, Watson and Webster stated that "Enabling courses are not part of the Australian Qualifications Framework and seem not to have been subject to a targeted review of effectiveness despite having existed since 1990" (2011:122).

Ramsay (2004, 2008) suggested the need for national coordination and monitoring of enabling program outcomes. The requirement for a national "systematic evaluation" on the efficacy of alternative university entry programs was recognised more than two decades ago (Cobbin & Barlow, 1993:ix). Despite these calls, quantitative evaluation of the outcomes from these programs has been constrained and sporadic.

Most research on enabling education in Australia has been qualitative in nature and undertaken by those engaged in teaching such programs. Important student outcomes such as increased self-confidence and self-esteem have been identified by these studies (see for example Cantwell & Grayson, 2002; Debbenham & May, 2005; Cullity, 2006; Spreadbury, 2007; Stone, 2008; Willans & Seary, 2011). However, these studies do not necessarily demonstrate improvements in individuals' human capital (Becker, 1964) with respect to certified qualifications for the workforce.

Ideological tension persists within enabling educator's circles concerning enabling programs' purpose that further obscures any scrutiny of outcomes. Since their inception in Australia three decades ago, as a socially just way to address issues of equity and equality in higher education and broaden access (May, 2004), bureaucratic and institutional agendas have also exerted influence over the roles of enabling programs as an equity strategy, a university recruitment strategy and a source of additional revenue (Clarke, Bull, & Clarke, 2004).

Clarke et al. (2000) suggested that what constitutes success in terms of enabling programs is a source of conjecture. Debate continues today within enabling educators' circles about what defines success

suggesting that articulation to undergraduate level study not be considered as the definition of enabling programs' success. Hodges et al. (2013:23) contribute to this debate by proposing that "…completion of an enabling course may be indicative of commitment and a work ethic from an employer point of view". This may hold true in some instances. Conversely an employer might also question the ability of such an applicant to commit to achieving goals if the student completes a university enabling program but does not articulate to degree level study. Hodges et al. do appear to recognise that enabling programs are not an end in themselves and suggest that enabling programs are "… merely pathways towards further learning" (2013:33).

Specific Commonwealth 'Enabling Loading' funding to universities for the provision of enabling programs commenced in 2005. This funding was linked to the number of enrolments in enabling programs and may have precipitated increased enrolments. University-based enabling programs are offered free of charge to participants and the high attrition rates may be influenced by this lack of financial commitment further obfuscating the interpretations of success. If students do not incur any explicit costs for enabling study an important impetus to persist to completion may be absent from their study decisions giving students "little reason to buy in" (Hodges et al. 2013:22). In addition, such programs, that were initially implemented to assist mature aged students to access university education, are now enrolling ever larger proportions of recent school leavers. Hodges, et al (2013:16) noted that "…secondary students appear to be becoming somewhat strategic and selecting enabling programs as a legitimate pathway for higher education".

The level of Government funding to universities for the purpose of offering enabling programs is dependent upon student enrolments. Giving attention to the end product of providing free enabling programs is important to measure the effectiveness of such funding and ensure evidence-based practice. This quantitative study investigates and compares the outcomes of students who chose to study by internal mode to outcomes from students enrolled by distance education.

The research questions that drove this study were (1) Does providing enabling programs in distance education mode increase access to these

programs? , (2) Does providing enabling study by distance education affect program outcomes in terms of students' academic performance, completions of enabling program and articulations to undergraduate study?, and (3) Can mode of study chosen for enabling programs predict outcomes in terms of academic performance, completions and articulations?

These research questions have been addressed with analysis of enabling enrolments at CQUniversity (previously Central Queensland University). Notwithstanding the wealth of heart-warming anecdotal stories collected of lives positively influenced by undertaking university enabling study (Doyle, 2006), no research exists to quantify the extent that enrolment and completion of an enabling program led to entry into undergraduate study. This study is the first rigorous quantitative evaluation undertaken of the outcomes of these enabling programs at CQUniversity.

The case study context and enrolment patterns from 2001 to 2011 are first presented before an analysis of completions demonstrates that students who study enabling by distance have lower rates of program completion than internal students. An investigation of articulations is then undertaken revealing a higher attrition rate between enabling and undergraduate study for distance students compared to internal students. Finally, academic performance is contrasted between internal and distance education students showing a significant difference in mean GPA scores.

The conclusion drawn from this statistical analysis is that providing enabling study by distance education does improve access to these programs but does not improve outcomes in terms of students' academic performance, program completions or articulations to undergraduate study. In addition, studying an enabling program by distance education was the strongest predictive factor for negative student outcomes in terms of academic performance, completions of enabling program and articulation into undergraduate study.

Case study context

CQUniversity is one of many Australian tertiary institutions that offer university enabling programs by distance study. Other universities that

offer enabling by distance education include University of Newcastle, University of Southern Queensland and University of New England (Hodges, et. al., 2013). Enabling education at CQUniversity commenced in 1986 and expanded over the ensuing decades to become an important entry point for many aspiring university students.

Skills for Tertiary Education Preparatory Studies (STEPS), which commenced in 1986 was initially taught by internal study mode only but expanded its offering to distance students in 2007. Women into Science and Technology (WIST) was implemented in 1990 and was taught flexibly by distance education. From 2007 onwards WIST and STEPS both experienced increased enrolments; particularly for distance study. In 2009 Lifting the Boundaries to University (LIFT), commenced further expanding enabling program enrolments.

Applicants for both STEPS and LIFT had to complete intake testing to gain entry. There was no intake test for WIST. The application, enrolment and course assessment of STEPS and LIFT students complied with set dates from the CQUniversity academic calendar for terms 1 and 2 with LIFT also offered during term 3. STEPS had a set curriculum and students were expected to complete all courses listed under the program. LIFT made only one course compulsory but students had to complete at least two courses.

WIST applicants could enrol at any time during the year and commence study almost immediately on their preferred courses. There was no set minimum number of courses and students could study at their own pace. While STEPS offerings included distance study it was the only one of these three enabling programs that provided internal study options. WIST and LIFT were taught exclusively by distance. The WIST program provided the greatest contrast having been designed to fit flexibly around women's busy lifestyles of employment and/or family responsibilities allowing enrolment at any time of the year and self-paced study. Table 1 sets out the differences and similarities in each of these enabling program offerings.

Table 1: *STEPS, WIST, LIFT Enabling programs at CQUniversity 2001-2011*

	STEPS	**WIST**	**LIFT**
Commenced	1986	1990	2008
Target group	Males & females	Females (Males from 2009-2011)	Males & females
Intake test	Yes	No	Yes
Application/ Enrolment	Term 1 & 2	Enrol anytime	Term 1, 2, &3
Assessment timing	Submission dates set	Self-paced	Submission dates set
Curriculum (courses)	Set number of courses for each offering	Flexible number of courses according to interest/need	Flexible number of courses according to need – one was compulsory
Study mode	Internal and DE	DE only	DE only

As with enabling programs offered by other Australian universities, no systematic quantitative research had been undertaken on these programs. However, differences in success rates were becoming apparent from student records and King (2011) was commissioned to conduct a review of enabling Programs at CQUniversity. Recognising that the STEPS, WIST and LIFT programs had more similarities than differences, the university followed King's (2011) recommendation and combined these three programs as a single offering, incorporating any differences in structure or curriculum, from 2012 under the historical title of STEPS. However, the flexibility of enrolment and self-paced study that had been afforded under the WIST program no longer applies and all enabling enrolments and assessment is conducted according to the university's academic calendar.

Although these programs are now integrated into a single offering, the archival data used to compare distance and internal study success rates also provides opportunity to disaggregate the enrolment, completion

and articulation rates by the different programs. The available data commences from 2001 as it was from this time that enabling students were provided with a student number allowing for centralisation of electronic enrolment records and finishes at 2011 after which no further enrolments in WIST or LIFT were taken.

Enrolments

A total of 9,820 discrete first enrolments in the enabling programs STEPS, WIST and LIFT were accepted from 2001 to 2011. Of this number 9,493 were first enrolments and 327 were inverse enrolments. Students who enrolled inversely had initially commenced an undergraduate degree and subsequently reverted to an enabling program.

Enrolment numbers were fairly stable at around 600 students in each of the years from 2001 to 2006. In the ensuing years enrolments experienced a sharp increase which may have been precipitated by the provision of specific Commonwealth funding from 2005 onwards (refer Table 2).

Table 2: *Enabling program enrolments 2001-2011*

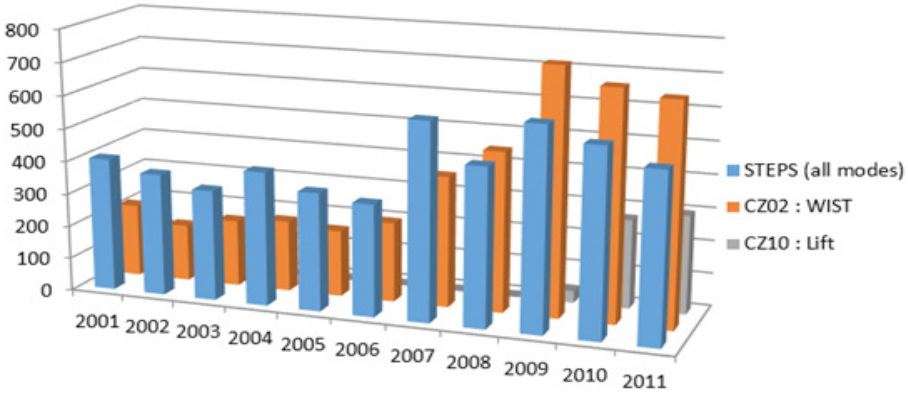
Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Total
Internal study	377	348	336	406	358	339	299	283	343	349	317	3,755
Distance Education	249	195	202	216	201	241	693	679	1,050	1,178	1,161	6,065
Total	626	543	538	622	559	580	992	962	1,393	1,527	1,478	9,820

The numbers of students undertaking Enabling by distance increased from 249 (39.8%) in 2001 to 1,161 (78.5%) in 2011. Distance study mode accounted for the majority of enrolments over the eleven year time frame with more than 61% choosing this option.

Although the majority of enabling students were enrolled by distance education, the proportions choosing distance study varied amongst the age categories. Distance study was chosen by half (50.8%) of students aged less than 21 years old. By comparison two thirds (66.8%) of students aged 22 to 31 elected to study an enabling program by distance.

The WIST program that was taught entirely by distance education contributed most strongly to the increasing enrolments from 2005 onwards. Specific commonwealth funding for enabling programs had commenced in 2005 and this, together with the ease of entry into the WIST program, may have precipitated such a large increase. From 2007 STEPS was broadened to include distance study further adding to the increase. With the introduction of LIFT, taught by distance education only, in 2009 enrolments in enabling were further expanded (refer Figure 1).

Figure 1: *Increasing enrolments in STEPS, WIST, LIFT 2001-2011*



Source: Bookallil and Rolfe 2013

Completions

Enabling program completions increased from 39.2% in 2001 to peak at 52.9% in 2005. From 2006, as enrolments experienced a sustained increase, the completion rate fell reaching a low of 30% in 2008. Although completions improved in the ensuing years the figure was still only a 39.1% completion rate in 2011.

STEPS was the only one of the three enabling programs that offered face-to-face teaching by internal study. STEPS offerings taught in a mode that included face-to-face classroom interaction had higher completion rates than other modes. CZ01 STEPS Accelerated and

CZ04 STEPS Extended were both taught by internal day classes and proved the most successful with a completion rate of 72.5% and 59.8% respectively. Entry into CZ01 STEPS Accelerated was determined by the applicant's score on the intake test (refer Table 1). CZ05 STEPS Flex which included night classes had a 55% completion rate. Where STEPS was taught by distance the completion rates were lower than when taught face-to-face mode with CZ06 STEPS (Ext) at 40.2% and CZ09 STEPS (Exte) at 42.9% (refer Table 3).

Table 3: *Program Label and Completion of enabling*

Program	Mode of study	Did not complete EP	Completed EP	% Completed	Total
CZ01 : STEPS Acc	Internal (day classes)	509	1344	72.5%	1853
CZ04 : STEPS Ext	Internal (day classes)	625	930	59.8%	1555
CZ05 : STEPS Flex	External (night classes)	127	155	55.0%	282
CZ06 : STEPS (Ext)	Distance study	153	103	40.2%	256
CZ09 : STEPS Exte	Distance study	545	409	42.9%	954
CZ02 : WIST	Distance study	3484	530	13.2%	4014
CZ10 : Lift	Distance study	305	274	47.3%	579

Distance education had attracted a much greater proportion of enrolments than internal study. However, internal enrolments had a far higher program completion rate of 65.7% compared to only 22.7% for distance study, as demonstrated in Table 4.

Table 4: *Mode of study and Completion of enabling program*

Study mode	Total first enrolments	Did not complete EP	Completed EP	% Completed
Internal	3700	1268	2432	65.7%
Distance education	5793	4480	1313	22.7%

χ^2 (1, N = 9493) = 1751.181, p = .000

A Chi-square test for independence (with Yates Continuity Correction) revealed a significant association between mode of study and completion status χ^2 (1, N = 9,493) = 1,751.181, p = 0.000. According to Cohen's (1988) criteria with *phi* = -0.43 this indicates a medium to large negative effect on completion by enrolling in enabling by distance education.

Articulations

Not all students completing an enabling program went on to further study, or further study at the host institution. In the eleven-year time frame of this study the Queensland Tertiary Admissions Centre (QTAC) advise that 241 applicants accepted an offer to other Queensland universities where STEPS, WIST or LIFT results from CQUniversity formed the basis of their Tertiary Entrance Ranking (TER). These students were added to the numbers articulating to CQUniversity undergraduate programs to more accurately determine articulation figures.

Only the 9,493 records of first enrolments in enabling were used to calculate articulations. Inverse enrolments were not included as these students were already in undergraduate prior to undertaking enabling study and so their records indicated articulation regardless of whether they continued with undergraduate after reverting to enabling. To include such inverse enrolments may have overstated the articulation statistics.

The figures in Table 4 include the QTAC data on offers to study at other universities revealing that, from 2006 onwards there was a steady decline in articulations to university study resulting from enrolments in enabling. Just as the year 2005 was most successful in terms of

completion of enabling, so too was 2005 the most successful year in terms of study progression with 55.3% articulating from enabling to undergraduate level study.

However, the data in Table 5 also reveals that, as enrolments rose after 2005, the percentages of students articulating from enabling programs to undergraduate study declined to a low of 30.6% in 2011.

Table 5: *Articulations to undergraduate study at any Queensland university*

Year	Enabling enrolments at CQU	Articulated to CQU	Percent	QTAC offer accepted	Total articulated to undergraduate	Percent
2001	620	292	47.1%	6	298	48.1%
2002	542	233	43.0%	12	245	45.2%
2003	536	239	44.6%	20	259	48.3%
2004	606	307	50.7%	6	313	51.6%
2005	546	284	52.0%	18	302	55.3%
2006	561	228	40.6%	13	241	43.0%
2007	953	311	32.6%	25	336	35.3%
2008	931	294	31.6%	24	318	34.2%
2009	1,336	416	31.1%	31	447	33.5%
2010	1,469	460	31.3%	54	514	35.0%
2011	1,393	394	28.3%	32	426	30.6%
Totals	9,493	3,458	36.4%	241	3,699	39.0%

Despite the low articulation rates, CQUniversity may be more successful in articulating students from enabling than other universities. While there is little data with which to compare these figures to confirm this, Lomax-Smith, Watson and Webster stated that "…in 2010, there were 4,061 students who had progressed to a Bachelor degree level course out of the 12,411 students [nationally] who undertook a pathway enabling

course in 2009" (2011:123). These 4,061 articulations represent 32.72% of the 2010 Australian enabling programs cohort. CQUniversity's articulation rate from enabling to Undergraduate of 35.0% in 2010 compares favourably since it is 2.28 percentage points above this figure.

The articulation rate for internal enabling study was 51.6% compared to 26.7% for distance enrolments. These figures give an attrition rate between enabling and undergraduate study of 48.4% for internal enabling students and 73.3% for those students who attempted enabling by distance as demonstrated in Table 6. Chi-square testing for independence indicates a significant association between mode of study for enabling program and articulation to undergraduate χ^2 (1, N = 9,493) = 605.574, p = 0.000. The effect of undertaking Enabling study by distance is negative with *phi* = -0.253 well above Cohen's (1998) criteria for a small effect and close to 0.3 criteria for a medium effect.

Table 6: *Articulation to undergraduate by mode of study for enabling*

Mode of study	Did not articulate	Articulated	Percentage articulated	Total
Internal study	1789	1911	51.6%	3700
Distance education	4246	1547	26.7%	5793

χ^2 (1, N = 9493) = 605.574, p = .000

Given that enabling study by face-to-face teaching had higher completion rates than internal study, it is not surprising that enabling study by internal mode was much more likely to result in articulation into university than was enabling study by distance mode.

More important to the analysis was to identify if students who had demonstrated academic capability, as measured by their Grade Point Average (GPA) achieved in the enabling program, progressed on to undergraduate study. To test this a dummy variable was created to categorise enrolments with a passing GPA of four or above to allow for analysis of choices made by those considered to be "enabled" for undergraduate study.

Table 7 provides the cross tabulations showing the numbers and percentages of successfully enabled students who progressed to undergraduate study at CQUniversity. It was not possible to determine the enabling program study mode of the 241 students who accepted QTAC offers to other Queensland universities. However, these 241 students are only 2.6% of the overall enrolment in enabling at CQUniversity during the time frame of this study.

Table 7: *Enabling study GPA and Articulated Cross tabulation*

Enabling GPA	Did not articulate	Articulated	Percentage articulated	Total
GPA < 4 = Fail	4,594	926	16.8%	5,520
GPA >= 4 =Pass	1,441	2,532	63.7%	3,973

χ^2 (1, N = 9493) = 2197.448, p = 0.000

As would be expected a Chi-square test for independence (with Yates Continuity correction) reveals a large and significant association between achieving a passing GPA in enabling and articulation to undergraduate study. χ^2 (1, N = 9,493) = 2197.448, p = 0.000. The *Phi* of 0.481 is just under Cohen's (1988) threshold of 0.5 that would indicate a large effect.

This analysis not only reveals a 36.3% attrition rate between enabling programs and degree level study for students who had achieved a pass level GPA, it also reveals that 926 students who did not achieve a passing GPA were subsequently accepted into undergraduate study. Further research on this revelation might be instructive.

Further investigation was undertaken on the 3,973 students who had achieved a pass level GPA to compare the rates of articulation into undergraduate study for those students who studied by internal mode compared to those who studied an enabling program by distance education. Table 8 demonstrates that 67.5% of internal enabling students who had achieved an enabling GPA of pass or higher had articulated to undergraduate study indicating that the attrition rate between enabling programs and degree level study from internal study was 32.5%. The articulation rate between distance education enabling

programs and degree level study for students who had achieved a pass level GPA was 56.3% which is 11.2% lower than for internal students giving a higher attrition rate of 43.7%

Chi-square testing revealed an association between mode of study for students who achieved a passing GPA in their enabling program and articulating to undergraduate study. However, while mode of study was significant, Phi = -0.11, suggesting the effect of mode of study for enabling on articulation to undergraduate study is small for students who had successfully completed their enabling program.

Table 8: *Articulations by mode of study for students with a passing GPA from a university enabling program*

Mode of study	Did not articulate	Articulated	Percentage Articulated	Total
Internal study	857	1780	67.5%	2637
Distance education	584	752	56.3%	1336
Total	1441	2532	53.7%	3973

$\chi^2(1, n=3973) = 47.754, p = .000$

Predicting articulation to undergraduate study

The high attrition rate between enabling and undergraduate enrolment for successfully "enabled" students appeared enigmatic when the purpose of enabling programs is to prepare for tertiary study. An issue of interest, therefore, was whether articulation could be predicted from the variables in the data.

Logistic regression was used to assess which variables might predict whether the 3,745 students who had successfully completed their enabling program between 2001 and 2011 would articulate to undergraduate study. The STEPS enabling program had several variations as detailed in Table 3. Not all of these variations were offered in each year. To simplify this analysis all offerings of STEPS were combined to provide a single discrete variable to compare against the

outcomes of the programs WIST and LIFT.

Ten independent variables were entered into the model: three categories of enabling programs, three categories of SES (as measured by Australian post codes), Mode of study, gender, students' age at enrolment in Enabling (log transformation was used to more closely resemble a normal distribution), and having achieved a passing GPA in their enabling program. Table 9 provides the data on the variables in the model showing that socioeconomic status, gender, age or having a passing GPA in enabling were not significant contributing factors for predicting articulation when controlling for all other factors in the model. Note that the STEPS mode of study has been omitted from the analysis by SPSS, as the probability of being enrolled in a STEPS program is perfectly collinear with the probability of being enrolled in a LIFT or WIST program.

Table 9: *Predicting articulation for successful enabling students*

	B	S.E.	Wald	df	Sig.
LowSocio(1)	.346	.499	.480	1	.488
MedSocio(1)	.111	.500	.049	1	.825
HighSocio(1)	-.226	.564	.161	1	.689
CZ10LIFT(1)	.467	.157	8.847	1	.003
CZ02WIST(1)	.352	.129	7.402	1	.007
DE(1)	-.665	.100	44.005	1	.000
Male(1)	-.083	.081	1.051	1	.305
LneAge	-.219	.105	4.337	1	.037
PassEPGPA(1)	.079	.229	.120	1	.729
Constant	1.210	.661	3.351	1	.067

χ^2 (9, N = 3745) = 76.417, p <.001

Having studied enabling by distance mode (DE variable) made a uniquely statistically significant contribution to the model (p<.001).

The effect was negative and revealed an odds ratio of 0.514 indicating that for every additional student who successfully completed enabling by distance mode they were only half as likely to articulate than students who studied by internal mode. Having studied the WIST or LIFT programs were also statistically significant ($p<.05$). However, the effect of these variables would interact with the DE variable since these programs were taught exclusively by distance. Age at enrolment in enabling also contributed significantly to the model ($p<.05$). The effect of age was negative and again there is an interaction with distance study as students between the ages of 21 years and 45 years were the group most likely to undertake enabling study in the distance mode.

The full model containing all predictors was statistically significant, χ^2 (9, N = 3,745) = 76.417, $p < 0.001$, indicating the model was able to distinguish between students who articulated and those who did not articulate to an undergraduate program. However, the model with these predictors only improved the classification of articulations by 5%, correctly classifying 65.2% compared to 64.7% without the variables included. The model with these variables explained only between 2% (Cox and Snell R square) and 2.8% (Nagelkerke R squared) of the variance in articulation rates for those students who had successfully completed their enabling program.

Grade results

An independent-samples t-test was conducted to compare the GPA scores for students who studied an enabling program by internal mode and those who studied by distance education. The results, tabulated in Table 9, reveal a significant difference in GPA scores for internal (M = 4.35, SD = 2.446) and distance education (M = 1.50, SD = 2.393): t (9,491) = 56.091, p<.001, two-tailed).

The magnitude, eta squared, of the differences in the mean GPA scores between internal and distance students was 0.25 which is well above the measure of 0.14 that Cohen distinguishes as his guideline for a large effect (Cohen, 1988:284-7).

Table 10: *Association between study mode and GPA scores*

		N	Mean GPA	Std. Deviation	Std. Error Mean
EP GPA	**Internal study**	3700	4.35	2.446	.040
	Distance education	5793	1.50	2.393	.031

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	.021	.886	56.091	9491	.000	2.849	.051	2.750	2.949
Equal variances not assumed			55.819	7752.641	.000	2.849	.051	2.749	2.950

Eta squared = $t^2 / t^2 + (N1 + N2 - 2) = 3146.2/3146.2 + (3700 + 5793 - 2) = 0.25$

The differences in the mean GPA scores between internal study and distance mode for enabling programs is important to note. The mean GPA score for enabling students who studied by internal mode is 4.35, which is just above the GPA pass rate of 4. Not only was the mean GPA score of 1.5 for enabling students who studied by distance mode considerably less than that achieved by internal students it was well under the GPA pass rate of 4 indicating that distance students were less likely to experience success in the enabling program.

Conclusions and recommendations

University enabling programs are an important equity initiative to provide a second chance to those whose education has been disrupted. These programs are offered free of charge and delivered by both internal study and distance education in an effort to increase equity of access.

There are now 34 Australian universities receiving funding to offer enabling education.

Specific Commonwealth funding for enabling programs commenced in 2005 may have precipitated a sharp increase in students accessing enabling study. However, the increased enrolments did not translate into increased program completions or articulations to undergraduate study. Despite repeated suggestions of the need for a systematic evaluation of ever expanding university enabling programs most research has been qualitative in methodology.

This study attempts to fill a gap in the literature on enabling programs by providing quantitative analysis of student outcomes from one university over an eleven year time frame. In particular the analysis focusses on the differences between outcomes for internal study and distance education because it is distance education that has contributed most heavily to the escalation in student enrolments since 2006.

The analysis presented has demonstrated that providing greater opportunity of access to enabling programs by distance education increases enrolments but does not increase completions nor articulations to undergraduate study. Distance study also appears to have a negative effect on student achievement as measured by grade point average when compared to internal study.

The fact that entry to CZ01 STEPS Accelerated was restricted according to applicants' performance on an entry test suggests that individuals' initial academic capability may be a factor in the success rate of this program. However, data to evaluate this question was not available. Consideration of such pertinent factors as the enabling students' academic capability on entry and the effect of teaching staff would be required before a conclusive assertion can be made regarding causation. Such research would also need to include academic success in particular subject areas, as well as overall program completions, to eliminate curriculum factors.

Further research into the learning styles of enabling program students with respect to intrinsic versus extrinsic motivation might shed some light on why enabling study by distance education has lower success rates. Such research might form the basis of evidence based strategies to

increase retention in enabling and articulation to undergraduate study.

The revelation that 926 (16.8 %) students who did not achieve a passing GPA from their enabling programs were subsequently accepted into undergraduate study suggests that some enrolments in enabling programs may be unnecessary. Further research on this point might prove instructive for enabling program recruitment practices.

Enabling programs are offered free of any financial commitment by participants. The low program completion rate and high attrition rate between enabling and undergraduate study, particularly for distance study, might be addressed by more targeted enrolment or a stronger incentive/reward structure, such as charging a minimal fee.

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About the Authors

Cheryl Bookallil has worked in the higher education sector for around 25 years as an Equity practitioner, a Careers Educator and as a contract academic. Her own experience as a 'second chance' learner combined with a strong passion for social justice provides the motivation for research into the economic outcomes of university Enabling programs. Cheryl is a research student at Central Queensland University (CQU).

John Rolfe is Professor in the Faculty of Arts, Business, Informatics and Education at the Central Queensland University in Rockhampton. He is a member of the Centre for Environmental Management where he leads the Environmental Economics program.

Contact details

Cheryl Bookallil
CQUniversity, Australia

Email: c.bookallil@cqu.edu.au