



Study pathways of international students in Australia

Introduction

Many international students follow study pathways through the Australian education system rather than limiting their study to a particular sector or level of the education system. These pathways are based largely on the system of inter-sectoral linkages available through the Australian Qualification Framework (AQF) but also include English Language Intensive Courses for Overseas Students (ELICOS), as well as foundation and non-award studies which are currently outside the AQF.

The uptake of various pathway options reflects the value students place on articulated progression through the different education sectors. The examination of international student pathways is based on data from the Provider Registration and International Student Management System (PRISMS), the source of Australian Education International's (AEI) International Students database and therefore is limited to international students studying in Australia on a student visa. The analysis gives a useful picture of international student movements and linkages within the Australian education system.

This paper follows on from earlier AEI Research Papers¹ which highlighted broad trends in study pathways for international students studying in Australia in the periods 1 January 2002 to 31 December 2004; and 1 January 2002 to 31 December 2005.

Methodology

Two cohorts of international students studying in Australia were examined in this analysis. The first cohort consisted of students who commenced study in Australia for the first time in the year 2002 and tracked their study pathways for the period 1 January 2002 to 31 December 2005. The second cohort were students who commenced study in Australia for the first time in the year 2004 and tracked their study pathways for the period 1 January 2004 to 31 December 2006.

As the data cover three full years of study for both cohorts, they reveal clear inter-sectoral pathways for each population. However, readers should be aware that the three year timeframe of the reference periods may not necessarily cover the entire period of study for some students—these students could have a study period in Australia of more than three years. It should be noted that for both cohorts, there were instances of simultaneous multiple sector enrolments, mainly involving the ELICOS² sector. These instances, although not separately identified due to the complexities with extracting the information from PRISMS, were nonetheless of some interest as they contributed to the mix of pathways for international students. In addition, readers should note that for the purposes of this research paper, a period of study in a particular sector signifies a student has completed some study in the sector and does not necessarily indicate they have been awarded a qualification for that study.

¹ Available on the AEI website at > <http://aei.dest.gov.au/AEI/PublicationsAndResearch/OtherAEIResearch/Default.htm>.

² The *English Australia Survey of Major ELICOS Regional Markets in 2005 (2006)* found that only 49% of all ELICOS students travel to Australia on a student visa. AEI international student data relate only to students in Australia on a student visa and only data on these students are included in this paper.

Study pathways of international students in Australia

With the exception of the ELICOS sector, a high proportion of students remained in the sector of their first enrolment—that is, they started and finished their course of study in Australia within the one sector. However, there are those who recorded study pathways from the sector in which they were first enrolled into another sector.

There is almost no change in the ranking of the most common inter-sectoral pathways between the 2002 commencements and 2004 commencements cohorts, nor was there any significant change in the distribution of students in any of the other pathways type.

Overall, almost one-third of international students who commenced study in Australia were Higher Education-only students for both cohorts in this analysis. Similarly, the second and third largest proportions of students were those who were in the Other³ sector and ELICOS sector only.

There was, however, a smaller proportion of Higher Education-only students in the 2004 commencements cohort compared to the 2002 cohort. Conversely, there were slightly higher proportions of Other and ELICOS sector only students in the 2004 cohort. Moreover, a higher proportion of 2004 commencements followed an ELICOS-Higher Education pathway—8.4% compared to 7.2% for 2002 commencements (Table 1).

The analysis also showed that in addition to the almost one-third of each cohort who were Higher Education-only students, a further nineteen percent of all students recorded an inter-sectoral pathway finishing in the Higher Education sector. Similarly, around seven percent of students in each cohort were VET sector-only students and an additional nine percent recorded an inter-sectoral pathway finishing in the VET sector.

Table 1. All international students: Top 20 sector pathways (including single sector)

<i>Sector combinations</i>	<i>2002 commencements</i>		<i>2004 commencements</i>	
	<i>Prop. of students</i>	<i>Ranking 2002</i>	<i>Prop. of students</i>	<i>Ranking 2004</i>
Higher Education	31.8%	1	28.0%	1
Other	12.7%	2	15.3%	2
ELICOS	11.7%	3	12.1%	3
ELICOS-Higher Education	7.2%	4	8.4%	4
VET	7.0%	5	6.6%	5
ELICOS-VET	5.6%	6	6.5%	6
Schools	4.6%	7	4.2%	7
VET-Higher Education	3.8%	8	3.7%	8
ELICOS-Schools	3.2%	9	3.0%	9
ELICOS-VET-Higher Education	1.8%	11	2.5%	10
Other-Higher Education	2.7%	10	2.4%	11
ELICOS-Other-Higher Education	0.9%	13	0.8%	12
Higher Education-VET	0.4%	17	0.7%	13
ELICOS-Higher Education-VET	0.2%	20	0.5%	14
Schools-Higher Education	1.0%	12	0.5%	15
ELICOS-Schools-VET	0.5%	14	0.4%	16
ELICOS-Other	0.3%	18	0.4%	17
Schools-VET	0.5%	16	0.3%	18
ELICOS-Other-VET	0.2%	21	0.2%	19
Other-VET	0.2%	19	0.2%	20
Total all international students	100,450	..	100,183	..

³ Comprises study abroad, foundation courses, enabling studies and other non-award courses that do not lead to a qualification under the Australian Qualification Framework.

Number of sectors

The number of student commencements in 2002 and 2004 was similar. About two-thirds of each cohort were enrolled in a single sector in the three years to the end of the reference period. A further one-quarter were in two sectors. The data show a slightly higher proportion of the 2002 cohort students were single sector students and conversely, larger proportions of the 2004 commencements studied in two or three sectors in the reference period (Table 2).

Table 2. Student numbers and number of sectors

<i>Number of sectors studied in</i>	<i>2002 commencements</i>		<i>2004 commencements</i>	
	<i>No. of students</i>	<i>Prop. of students</i>	<i>No. of students</i>	<i>Prop. of students</i>
1	68,100	67.8%	66,409	66.3%
2	26,516	26.4%	27,613	27.6%
3	5,506	5.5%	5,944	5.9%
4	324	0.3%	217	0.2%
5 or more	4	0.0%	0	0.0%
Sub-total (multiple sector)	32,350	32.2%	33,774	33.7%
Total international students	100,450	100.0%	100,183	100.0%

Single sector students

Most single-sector students were in the Higher Education sector, about double that of the Other sector, the next highest sector. This was followed by the ELICOS and VET sectors.

A larger proportion of 2002 commencements were in the Higher Education sector. There were 46.9% of 2002 commencements enrolled in the Higher Education sector compared to 42.3% for the 2004 cohort. The data show that slightly higher proportions of 2004 commencements were in the ELICOS and Other sectors while the proportions enrolled in VET and Schools remained relatively unchanged for the two cohorts (Table 3).

Table 3. Single sector international students

<i>Sector</i>	<i>2002 commencements</i>		<i>2004 commencements</i>	
	<i>No. of students</i>	<i>Prop. of students</i>	<i>No. of students</i>	<i>Prop. of students</i>
Higher Education	31,962	46.9%	28,100	42.3%
VET	7,013	10.3%	6,657	10.0%
ELICOS	11,738	17.2%	12,169	18.3%
Schools	4,620	6.8%	4,189	6.3%
Other	12,767	18.7%	15,294	23.0%
Total single sector students	68,100	100.0%	66,409	100.0%

Almost all international students who first enrolled directly into the Higher Education sector were single sector students. This was similar for both student cohorts and indicated that most international students in Australia who first undertook study in Higher Education did not articulate into another sector.

Of all international students who first enrolled in the ELICOS⁴ sector, a slightly higher proportion of the 2002 commencements cohort were single sector students. The data show 34.6% of 2002 commencements were single sector ELICOS students compared to 33.2% for 2004 commencements. Similarly, a slightly higher proportion of the 2002 commencements cohort who first enrolled in the VET sector, were VET sector-only students—62.7% compared to 60.9%.

⁴ ELICOS students studying in Australia on a student visa.

A higher proportion of 2004 commencements that were first enrolled in Schools were single-sector students—80.3% of this cohort were single sector Schools students compared to 70.3% of the 2002 cohort. Closer examination showed slightly more international students from the later cohort enrolled in the Schools sector at a lower level than those in the 2002 cohort, thereby spending a longer period in the one sector. However, due to the three year timeframe of the reference periods for the student cohorts in this study, readers are reminded that the period may not capture the entire study pathways of these students.

A slightly higher proportion of the 2004 commencements cohort who first enrolled in the Other sector did not articulate to any other sector—83.4% of the 2004 cohort were Other sector-only students compared to 78.6% of the 2002 cohort. These were largely American students in the non-award Study Abroad programme.

Multiple sector student pathways

The two cohorts shared the same four most common pathways. The ranking of these pathways was also unchanged between the cohorts. About one-quarter of multiple sector students followed the ELICOS-Higher Education pathway, the most popular study pathway. The next most popular pathways were ELICOS-VET, VET-Higher Education and ELICOS-Schools.

It is interesting to note the change in distribution of the top pathways. The proportion of multiple sector students in the 2004 cohort in ELICOS-Higher Education increased to 25.3% from 22.9% for the 2002 cohort. Similarly, 19.8% of the 2004 cohort were in ELICOS-VET compared to 17.3% of the 2002 cohort. The proportion of students on a VET-Higher Education pathway was relatively unchanged between cohorts, and there was a slight fall in the proportion of ELICOS-Schools students, from 10.4% in the 2002 cohort to 9.3% of the 2004 cohort (Table 4).

Table 4. Multiple sector students: Top 20 sector pathways

<i>Sector pathways</i>	<i>2002 commencements</i>		<i>2004 commencements</i>	
	<i>Prop. of students</i>	<i>Ranking 2002</i>	<i>Prop. of students</i>	<i>Ranking 2004</i>
ELICOS-Higher Education	22.9%	1	25.3%	1
ELICOS-VET	17.3%	2	19.8%	2
VET-Higher Education	11.8%	3	11.1%	3
ELICOS-Schools	10.4%	4	9.3%	4
ELICOS-VET-Higher Education	5.7%	6	7.3%	5
Other-Higher Education	8.4%	5	7.1%	6
ELICOS-Other-Higher Education	2.9%	8	2.5%	7
Higher Education-VET	1.4%	12	2.2%	8
ELICOS-Higher Education-VET	0.7%	15	1.5%	9
Schools-Higher Education	3.2%	7	1.5%	10
ELICOS-Schools-VET	1.6%	9	1.2%	11
ELICOS-Other	0.9%	13	1.1%	12
Schools-VET	1.4%	11	0.8%	13
ELICOS-Other-VET	0.6%	16	0.7%	14
Other-VET	0.7%	14	0.7%	15
ELICOS-Schools-Higher Education	1.5%	10	0.6%	16
VET-Higher Education-VET	0.2%	28	0.5%	17
Other-Schools	0.5%	19	0.5%	18
Other-VET-Higher Education	0.6%	17	0.3%	19
ELICOS-VET-Higher Education-VET	0.1%	35	0.3%	20
Total multiple sector students (number)	32,350	..	33,774	..

Note: Sector pathways shown in the table above may indicate an enrolment in more than one sector at the same time (i.e. simultaneous multiple sector enrolment) which cannot be separately identified.

Nationalities

Overall, the largest groups of student commencements for both cohorts were from China and the United States of America, together accounting for one-quarter of all commencing students in all sectors. India was the third largest in the 2004 cohort at 9.8%, up from 3.9% and tenth largest in the 2002 cohort.

Single sector students

Of the students enrolled in a single sector, the largest proportions were from the USA. The majority of these students were in Australia on the non-award Study Abroad programme and as a proportion of all single sector students increased from 13.4% in the 2002 cohort to 15.3% in 2004.

The second largest nationality in the 2004 cohort was India at 12.4%, a good growth from the 5.3% and sixth largest in the 2002 cohort. Interestingly, the proportion of Indian single sector students in the VET sector fell from 7.7% for the 2002 cohort to 6.0% for the later cohort. Further analysis shows that this fall was due to more Indian students from the 2004 cohort undertaking multiple sector study pathways than for the earlier cohort.

China, although the nationality with the largest proportion of commencements overall in both cohorts, has seen its share of single sector commencements fall from 8.1% and third largest proportion in 2002, to 6.8% and sixth largest in 2004. This is a reflection in part of the growth in the number of multiple sector students from China.

Table 5. Single sector students: Top 10 nationalities of 2004 commencements by sector

Nationality	2002 commencements						Total (no.)	Prop of all nationalities
	Higher Education	VET	ELICOS	Schools	Other			
	Proportion of students from each nationality							
United States of America	14.4%	5.6%	0.0%	1.0%	78.9%	9,092	13.4%	
India	91.1%	7.7%	0.1%	0.6%	0.6%	3,582	5.3%	
Japan	10.0%	14.4%	59.5%	9.2%	6.9%	5,159	7.6%	
Malaysia	87.5%	6.2%	0.6%	3.5%	2.2%	5,724	8.4%	
Republic of Korea	17.3%	7.3%	60.2%	12.3%	2.9%	3,309	4.9%	
China	62.7%	4.8%	7.0%	24.7%	0.7%	5,513	8.1%	
Germany	21.5%	6.0%	6.1%	14.2%	52.2%	1,914	2.8%	
Singapore	90.6%	3.2%	0.0%	3.4%	2.8%	4,153	6.1%	
Canada	54.7%	13.6%	0.2%	2.4%	29.0%	1,524	2.2%	
Brazil	5.5%	8.6%	67.5%	14.8%	3.6%	1,516	2.2%	

Nationality	2004 commencements						Total (no.)	Prop of all nationalities
	Higher Education	VET	ELICOS	Schools	Other			
	Proportion of students from each nationality							
United States of America	8.7%	4.8%	0.0%	0.5%	86.0%	10,135	15.3%	
India	93.0%	6.0%	0.4%	0.2%	0.4%	8,239	12.4%	
Japan	5.0%	13.2%	65.0%	8.7%	8.0%	5,001	7.5%	
Malaysia	85.8%	6.7%	0.9%	3.8%	2.8%	4,542	6.8%	
Republic of Korea	7.4%	4.8%	66.9%	17.4%	3.5%	4,526	6.8%	
China	66.2%	5.2%	5.7%	20.7%	2.2%	4,523	6.8%	
Germany	21.4%	4.4%	5.1%	13.6%	55.4%	2,802	4.2%	
Singapore	86.3%	5.0%	0.2%	4.6%	4.0%	2,543	3.8%	
Canada	56.9%	12.8%	0.1%	1.2%	29.0%	1,952	2.9%	
Brazil	4.3%	15.6%	63.8%	14.3%	2.0%	1,452	2.2%	

Most single sector American students study in the Other sector (non-award Study Abroad, as mentioned above). The proportion of students undertaking such study has grown from 78.9% of all US students in the 2002 cohort to 86.0% in 2004. Conversely, the proportion of single sector students from the USA in the Higher Education sector fell (14.4% to 8.7%).

The proportion of single sector Higher Education students from Japan and the Republic of Korea has at least halved between the 2002 cohort and 2004 cohort. Of the 2002 commencements, 10.0% of Japanese students and 17.3% of Korean students were in Higher Education. This had fallen to 5.0% and 7.4% respectively for 2004 commencements. On the other hand in the 2004 cohort, these two nationalities experienced at least a five percent increase in the proportion of students studying in the ELICOS sector when compared to the 2002 cohort (Table 5).

Multiple sector students

The most common nationalities among multiple sector students from the 2004 cohort were China, Republic of Korea, Thailand, Hong Kong and Japan. The largest proportion of multiple sector students from both the 2002 and 2004 cohorts was from China, reflecting its position as the largest contributor of international students attending educational institutions in Australia. The ranking of some top nationalities have changed and reflects the growth in the numbers of students from those nationalities. India and Bangladesh were ranked 15 and 12 largest proportions of multiple sector students in the 2002 cohort and moved up to positions 7 and 9 in the 2004 cohort.

The most common sector pathways of multiple sector students differed for each nationality. However, the nationality with the most dramatic change in study pathways between the two cohorts was India. By far the most popular pathway for the 2002 cohort of Indian students was VET-Higher Education with 47.0%. This proportion had fallen to just 13.3% for the 2004 cohort. Conversely, the ELICOS-Higher Education and Higher Education-VET pathways, the second and third most popular pathways of Indian students in the 2002 cohort (with 14.5% and 11.4% respectively) were the two most popular study pathways for the 2004 cohort with 40.5% and 25.1% respectively.

There have also been shifts in study pathways for students from Bangladesh. The 2004 cohort shows a larger proportion of students pursuing an ELICOS-VET pathway, 29.3% compared to 11.0% in the 2002 cohort. The shift has been away from the ELICOS-Higher Education and VET-Higher Education pathways.

Larger proportions of students from China and Taiwan recorded an ELICOS-Higher Education pathway than any of the other top ten nationalities. There was also a greater proportion of Chinese and Taiwanese students on this pathway in the 2004 cohort than the earlier cohort. The proportion of Chinese students on an ELICOS-Schools pathway has declined from 19.5% of the 2002 cohort from China to 14.9% of the 2004 commencements. The ELICOS-VET and ELICOS-VET-Higher Education pathways are the second and third most popular pathways for both cohorts, with their proportions remaining relatively unchanged between groups.

The ELICOS-VET pathway was the most popular with students in both cohorts from the Republic of Korea and Japan. The proportion grew from 24.7% of the 2002 cohort from the Republic of Korea to 34.8% of the later cohort. There was only a slightly smaller proportion of Japanese students in the study pathway in the 2004 cohort, 42.9% compared to 46.3% of Japanese students in the 2002 cohort (Table 6).

Table 6. Multiple sector students: Top 10 nationalities and most common pathways

	2002 commencements		2004 commencements	
	Prop of each nationality	Ranking 2002	Prop of each nationality	Ranking 2004
<i>China</i>		1		1
ELICOS-Higher Education	31.7%		ELICOS-Higher Education	35.4%
ELICOS-Schools	19.5%		ELICOS-Schools	14.9%
Schools-Higher Education	6.1%		ELICOS-VET-Higher Education	10.8%
<i>Republic of Korea</i>		5		2
ELICOS-VET	24.7%		ELICOS-VET	34.8%
ELICOS-Schools	21.7%		ELICOS-Schools	19.2%
ELICOS-Higher Education	21.2%		ELICOS-Higher Education	16.1%
<i>Thailand</i>		3		3
ELICOS-Higher Education	42.7%		ELICOS-VET	38.5%
ELICOS-VET	30.0%		ELICOS-Higher Education	33.9%
ELICOS-VET-Higher Education	5.1%		ELICOS-VET-Higher Education	3.9%
<i>Hong Kong</i>		2		4
Other-Higher Education	19.1%		Other-Higher Education	19.4%
VET-Higher Education	18.3%		VET-Higher Education	18.0%
ELICOS-VET	14.6%		ELICOS-VET	17.4%
<i>Japan</i>		5		5
ELICOS-VET	46.3%		ELICOS-VET	42.9%
ELICOS-Higher Education	14.4%		ELICOS-Higher Education	14.4%
ELICOS-Schools	6.5%		ELICOS-Schools	9.9%
<i>Indonesia</i>		4		6
VET-Higher Education	24.4%		VET-Higher Education	24.3%
ELICOS-Higher Education	17.8%		ELICOS-Higher Education	19.4%
Other-Higher Education	14.3%		Other-Higher Education	15.0%
<i>India</i>		15		7
VET-Higher Education	47.0%		ELICOS-Higher Education	40.5%
ELICOS-Higher Education	14.5%		Higher Education-VET	25.1%
Higher Education-VET	11.4%		VET-Higher Education	13.3%
<i>Malaysia</i>		8		8
Other-Higher Education	36.4%		Other-Higher Education	40.7%
VET-Higher Education	25.6%		VET-Higher Education	20.5%
Schools-Higher Education	9.3%		Schools-Higher Education	10.7%
<i>Bangladesh</i>		12		9
ELICOS-Higher Education	32.5%		ELICOS-VET	29.3%
VET-Higher Education	29.9%		ELICOS-Higher Education	26.1%
ELICOS-VET	11.0%		VET-Higher Education	18.4%
<i>Taiwan</i>		7		10
ELICOS-Higher Education	35.6%		ELICOS-Higher Education	39.3%
ELICOS-VET	17.7%		ELICOS-VET	16.4%
ELICOS-VET-Higher Education	10.7%		ELICOS-VET-Higher Education	9.4%

Single sector students and levels of study pathways

As discussed above, a large proportion of international students were single sector students. Most studied at a single level of study however, there were those who recorded level of study pathways within a sector.

Higher Education sector

There has been a shift in the level of study pathway being undertaken by single sector Higher Education students. In the 2002 cohort, the largest proportion (56.0%) was undertaking a Bachelor Degree however, this share fell to 40.0% and second largest for the 2004 cohort. The most popular level of study for the latter cohort was Masters Coursework at 44.0%, up from 28.8% for the 2002 cohort.

VET sector

The level of study undertaken by the largest proportion of VET students in both cohorts was a Diploma. This proportion was much greater than the next highest levels, Certificate III and Advanced Diploma. However, the proportion of students undertaking a Diploma fell from 43.3% in the 2002 cohort to 36.2% in the 2004 group. The smaller proportion undertaking a Diploma in the later cohort has seen small rises in the proportion of students in most of the other more common level of study pathways for the sector, such as Advanced Diploma, Diploma-Advanced Diploma and Certificate II.

Schools sector

There has only been a small change in the distribution of level of study pathways across the two cohorts. The proportion of students undertaking secondary studies has declined from 83.0% of the 2002 cohort in the Schools sector, to 80.2% of the 2004 cohort. Conversely, the 2004 cohort has seen a small rise in the proportion of students undertaking primary school studies, from 13.8% in the 2002 cohort to 16.7% in the later cohort (Table 7).

Table 7. Single sector students: Sector and most common level of study pathways

	2002 commencements		2004 commencements	
	No. of students	Prop of sector	No. of students	Prop of sector
<i>Higher education</i>				
Bachelor Degree	17,906	56.0%	Masters Coursework	12,359 44.0%
Masters Coursework	9,194	28.8%	Bachelor Degree	11,253 40.0%
Graduate Diploma	1,127	3.5%	Doctoral Degree	997 3.5%
Doctoral Degree	1,057	3.3%	Graduate Diploma	722 2.6%
Bachelor Degree-Masters Coursework	762	2.4%	Graduate Diploma-Masters Coursework	705 2.5%
Graduate Diploma-Masters Coursework	549	1.7%	Bachelor Degree-Masters Coursework	626 2.2%
Masters Research	195	0.6%	Masters Coursework-Graduate Diploma	394 1.4%
Bachelor Degree-Graduate Diploma	142	0.4%	Masters Research	157 0.6%
Graduate Certificate	132	0.4%	Masters Research-Doctoral Degree	111 0.4%
Masters Coursework-Graduate Diploma	129	0.4%	Graduate Certificate	98 0.3%
<i>VET</i>				
Diploma	3,038	43.3%	Diploma	2,409 36.2%
Certificate III	1,002	14.3%	Certificate III	947 14.2%
Advanced Diploma	731	10.4%	Advanced Diploma	838 12.6%
Certificate IV	680	9.7%	Certificate IV	548 8.2%
Diploma-Advanced Diploma	243	3.5%	Diploma-Advanced Diploma	281 4.2%
Certificate IV-Diploma	218	3.1%	Certificate II	239 3.6%
Certificate II	212	3.0%	Certificate IV-Diploma	237 3.6%
Certificate III-Diploma	108	1.5%	Certificate III-Diploma	150 2.3%
<i>Schools</i>				
Secondary Studies	3,833	83.0%	Secondary Studies	3,358 80.2%
Primary Studies	639	13.8%	Primary Studies	699 16.7%
Primary Studies-Secondary Studies	120	2.6%	Primary Studies-Secondary Studies	131 3.1%