

Research Paper

Number 2008/01

Study pathways of international students in Australia

Introduction

A student's 'study pathway' is defined as the route taken as he/she progresses through his/her education in Australia. These pathways are based largely on the system of inter-sectoral and level of study 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.

This research paper examines the study pathways of international students over time. The students' movements through the five major education sectors, higher education, vocational education and training (VET), ELICOS, Schools and 'Other'¹, will be analysed. This analysis is based on data from the Provider Registration and International Student Management System (PRISMS), the source of Australian Education International's (AEI) International Student Data, and therefore is limited to international students studying in Australia on a student visa.

This paper is an annual update to a series of AEI Research Papers² on international student pathways.

For this study, two cohorts of international students studying in Australia will be examined. The first cohort consists of students who commenced study in Australia for the first time in the year 2003 and the analysis tracks their study pathways from their first commencements to 31 December 2005^{3,4,5}. The second cohort includes students who commenced study in Australia for the first time in the year 2005 and the analysis tracks their study pathways from their first commencements to 31 December 2007. The study pathways of these two cohorts can then be compared to determine recent pathway trends.

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.

 $^{^{1}}$ The 'Other' sector comprises study abroad, foundation courses, enabling studies and other non-award courses that do not lead to a qualification under the AQF.

² These research papers are available on the AEI website at > http://aei.dest.gov.au/AEI/PublicationsAndResearch/ResearchPapers/Default.htm

³ Student numbers for each cohort are derived from AEI data by matching a number of different variables such as date of birth, name and gender.

⁴ Instances of simultaneous multiple sector enrolments, mainly involving the ELICOS sector, were not separately identified due to the complexities with extracting the information from PRISMS.

⁵ Refer to Appendix 1 for further details on the methodology used for this research paper.

Key findings

For a cohort of international students commencing in 2005 and tracked for three years:

- 1. ELICOS had the highest number of international student commencements in 2005. This was followed by higher education, 'Other', VET and Schools sectors.
- 2. The higher education sector had the highest number of international students enrolling over the three year tracking period. This is followed by ELICOS, VET, 'Other' and Schools sectors.
- 3. The most common pathways chosen by students in the 2005 cohort were very similar to those chosen by a 2003 cohort, with no change in the ranking order for the top 11 pathways (including single sectors).
- 4. 64.5% of international students studied in a single sector only. The higher education-only student group (24.3%) comprised the largest single group, followed by the 'Other'-only (15.1%) and the ELICOS-only (12.6%) groups.
- 5. The remaining 35.5% of international students follow a multi-sectoral pathway. The top five multi-sectoral pathways are:
 - a. ELICOS-Higher Education (8.7%);
 - b. ELICOS-VET (7.9%);
 - c. VET-Higher Education (3.4%);
 - d. ELICOS-Schools (3.0%); and
 - e. 'Other'-Higher Education (2.5%).
- 6. Seven of the top ten multi-sectoral pathways began with ELICOS commencements. Five of the top ten multi-sectoral pathways ended in the higher education sector.
- 7. Students who first commence in the ELICOS sector are most likely to follow a multi-sectoral pathway (67.4%). Students who commence in higher education are least likely to (5.0%).
- 8. The top five nationalities with single-sector only pathways were the United States of America (USA), India, the Republic of Korea, China and Japan. Single-sector students from the USA are primarily in Australia on non-award Study Abroad programs. In comparison, their counterpart from India and China primarily study higher education level courses while students from Korea and Japan primarily study ELICOS courses.
- 9. The top five nationalities with multi-sector pathways were China, the Republic of Korea, Thailand, India and Hong Kong.
- 10. Of the international students who studied in a single sector only, 7.2% changed their level of study⁶ during the tracking period. This change in level of study mainly occurs in the higher education (e.g. from a Bachelors to a Masters degree) or in the VET (e.g. from a Diploma to an Advanced Diploma) sectors, with 9.3% and 24.2% of these students doing so respectively.
- 11. Pathways from higher education to VET had become more popular for the 2005 cohort with 'higher education-VET' and 'ELICOS-higher education-VET' pathways accounting for 5.2% of the student cohort compared to 1.8% for the 2003 cohort. 9.5% of all Indian students in the 2005 cohort follow a higher education to VET pathway.

_

⁶ Course level as registered by the education providers in the Commonwealth Register of Institutions and Courses for Overseas Students.

Study pathways of international students in Australia

Sector of commencements

Table 1 shows the number (and as proportion of each cohort population) of the students' first sector of commencements for both cohorts.

Table 1. International students' first sector of commencements

	2003 сотте	ncements	2005 commencements		
Sector	No. of students	Prop. of students	No. of students	Prop. of students	
ELICOS	38,274	37.3%	40,201	38.8%	
Higher Education	29,193	28.5%	26,563	25.6%	
Other	18,500	18.1%	18,976	18.3%	
VET	10,383	10.1%	12,880	12.4%	
Schools	6,128	6.0%	5,002	4.8%	
Total international students	102,478	100.0%	103,622	100.0%	

The number of student commencements in 2003 and 2005 is similar. ELICOS remains the largest sector of commencements for both cohorts with nearly four in ten commencements. It should be noted that the actual number of ELICOS commencements for both cohorts are much higher as a recent survey found that 41% of ELICOS students study in Australia on a visa other than student visa. As AEI international student data relate only to students in Australia on a student visa, these students are not included in this paper.

Higher education is the next largest sector of commencements, accounting for one quarter of 2005 cohort. Between the two cohorts, less international students commenced their education in Australia in the higher education sector in the 2005 cohort (25.6% compared to 28.5% in 2003 cohort). In contrast, the corresponding first commencements in the VET sector has increased in popularity (12.4% in 2005 cohort, up from 10.1% in 2003 cohort).

Distribution of commencements across all sectors

Table 2 shows the number (and as proportion of cohort population) of student commencements in each sector within the tracking period for both cohorts.

Table 2. International students' commencements across all sectors

	2003 сотте	encements	2005 comm	encements
	No. of	Prop. of	No. of	Prop. of
Sector	students	students	students	students
Higher Education	50,703	49.5%	47,520	45.9%
ELICOS	38,834	37.9%	40,981	39.5%
VET	22,142	21.6%	27,727	26.8%
Other	21,040	20.5%	21,426	20.7%
Schools	11,185	10.9%	9,137	8.8%

Note – i) The proportion of students in each sector is based on the cohorts' population (102,478 for 2003 cohort and 103,622 for 2005 cohort); and ii) total international students for each cohort is less than the sum of components as students can study in more than one sector.

⁷ The *English Australia* Survey of Major Regional Markets for ELICOS institutions in 2007 (2008) found that 59% of all ELICOS students travel to Australia using a student visa.

For both cohorts, even though about a quarter of all international students commenced their studies in Australia in the higher education sector (see Table 1), close to half of the student cohort populations have enrolled in the higher education sector at some point during the tracking period. Similarly, about 14% of the 2005 student cohort population have enrolled in the VET sector as their subsequent enrolment, in addition to the 12% who commenced their studies in Australia in the VET sector.

This is in contrast to the ELICOS and the 'Other' sectors where the numbers of commencements are similar to those who initially commenced studies in these sectors in Australia (compare Tables 1 and 2).

The rapid growth of the VET and the ELICOS sectors in recent years⁸ is evident, with increases of 5.2% (26.8% in 2005 cohort, up from 21.6% in 2003 cohort) and 1.6% (39.5% in 2005 cohort, up from 37.9% in 2003 cohort) respectively, primarily at the expense of the higher education sector which records a decrease of 3.6% (45.9% in 2005 cohort, down from 49.5% in 2003 cohort).

Table 3 shows the student numbers and the corresponding number of sectors that they have enrolled in during the tracking periods.

Table 3. International students' number of sector commencements

	2003 сотте	encements	2005 comm	encements
	No. of Prop. of		No. of	Prop. of
Number of sectors commenced	students	students	students	students
1	67,781	66.1%	66,808	64.5%
2	28,256	27.6%	30,692	29.6%
3	6,154	6.0%	5,891	5.7%
4 or more	287	0.3%	231	0.2%
Sub-total (multiple sector)	34,697	33.9%	36,814	35.5%
Total international students	102,478	100.0%	103,622	100.0%

About two-thirds of each cohort only enrolled in a single sector throughout their respective tracking period. The data shows a slightly higher proportion of the 2003 cohort students are single-sector students (66.1% compared to 64.5% in 2005 cohort) and conversely, larger proportions of the 2005 commencements undertook studies in two different sectors (29.6% compared to 27.6% in 2003 cohort). This indicates that a greater proportion of students in the 2005 cohort are utilising the inter-sectoral linkages study pathways as they progressed through their education in Australia.

Sectoral pathways

With a greater proportion of students in the 2005 cohort utilising the inter-sectoral linkages study pathways, Table 4 shows the top 20 sector pathways for each cohort population.

There is almost no change in the ranking of the most common inter-sectoral pathways between the two cohorts, though there is a shift in student distribution from the higher education to the VET sector. This is evident with the decrease in proportion of 2005 student cohort in 'higher education' commencements (-3.7%) and the increase in 'VET' commencements (+2.3%), as well as other inter-sectoral pathways leading to these sectors such as 'VET-higher education' (-0.2%), 'Other-higher education' (-0.2%), 'ELICOS-VET' (+2.0%) and 'higher education-VET' (+0.8%).

4

⁸ The end-of-year summary of international enrolment student data available on the AEI website at > http://aei.dest.gov.au/AEI/MIP/Statistics/StudentEnrolmentAndVisaStatistics/2007/Monthyly Sum December pdf.pdf

Table 4. International students' top 20 sector pathways (including single sector)

	2003 commo	encements	2005 commencements		
Sector combinations*	Prop. of students	Ranking 2003	Prop. of students	Ranking 2005	
Higher Education	28.0%	1	24.3%	1	
Other	14.6%	2	15.1%	2	
ELICOS	12.8%	3	12.6%	3	
ELICOS-Higher Education	8.7%	4	8.7%	4	
VET	6.2%	5	8.5%	5	
ELICOS-VET	5.9%	6	7.9%	6	
Schools	4.6%	7	3.9%	7	
VET-Higher Education	3.6%	8	3.4%	8	
ELICOS-Schools	3.3%	9	3.0%	9	
Other-Higher Education	2.7%	10	2.5%	10	
ELICOS-VET-Higher Education	2.4%	11	2.1%	11	
Higher Education-VET	0.3%	18	1.1%	12	
ELICOS-Other-Higher Education	1.0%	12	0.8%	13	
ELICOS-Higher Education-VET	0.3%	19	0.7%	14	
ELICOS-Other	0.4%	15	0.5%	15	
Schools-Higher Education	0.7%	13	0.5%	16	
ELICOS-Schools-VET	0.5%	14	0.4%	17	
ELICOS-VET-ELICOS	0.2%	22	0.3%	18	
Schools-VET	0.3%	17	0.3%	19	
ELICOS-Other-VET	0.2%	20	0.2%	20	
ELICOS-Schools-Higher Education	0.4%	16	0.2%	23	
Other sector pathways	3.0%		3.0%		
Total international students (number)	102,478		103,622		

^{* –} Order of sector combinations is based on their 2005 student cohort ranking

Despite decreasing in student proportion, higher education-only student group remain as the single largest group at almost one in four of 2005 student cohort. Similarly, the second and third largest proportions of students are those who studied in single sectors, i.e. the 'Other' and the 'ELICOS' sectors respectively. These three single-sector student groups account for more than half of the total student population for both cohorts. Apart from these three single-sector groups, the two remaining single-sector groups are also rank highly with the VET and the Schools sectors at fifth and seventh respectively.

Single-sector students

As shown earlier, two-thirds of students from both cohorts remain within a single sector of studies (see Table 3) with single-sector student groups comprising the top three, and five of the top seven sector pathways (see Table 4). This section looks at these groups of single-sector students.

Table 5. Single-sector international students

	200	3 commencen	nents	2005 commencements			
Sector	No. of students	Prop. of students	Prop. of first sector commencement	No. of students	Prop. of students	Prop. of first sector commencement	
Higher Education	28,711	42.4%	98.3%	25,224	37.8%	95.0%	
Other	14,955	22.1%	80.8%	15,609	23.4%	82.3%	
ELICOS	13,091	19.3%	34.2%	13,101	19.6%	32.6%	
VET	6,304	9.3%	60.7%	8,836	13.2%	68.6%	
Schools	4,720	7.0%	77.0%	4,038	6.0%	80.7%	
Total single-sector students	67,781	100.0%	66.1%	66,808	100.0%	64.5%	

As shown in Table 5, four in ten single-sector students are in the higher education sector. As a proportion of single-sector students, though, higher education-only student group record a decrease of 4.6% (37.8% in 2005 cohort, down from 42.4% in 2003 cohort). The data shows that the VET and the 'Other' sectors record increases of 3.9% and 1.3% respectively, in their proportions of 2005 single-sector student cohort (compared to corresponding 2003 cohort figures). Schools and ELICOS sectors remain relatively unchanged between the two cohorts.

The proportion of students remaining in their sector of their first enrolment —that is, they started and finished their course of study in Australia within the one sector and within the tracking period — varies.

Almost all international students who first enrolled in the higher education sector are single-sector students. This proportion, however, has decreased from 98.3% (for 2003 cohort) to 95.0% (for 2005 cohort) with notable increase in the proportion of students who initially commenced in the higher education sector and subsequently enrolled in the VET sector. The proportion of students undertaking 'higher education-VET' pathway has increased from 0.3% (for 2003 cohort) to 1.1% (for 2005 cohort), elevating the study pathway from a ranking of 18 to 12 over the corresponding time period.

Between the two cohorts, a slightly higher proportion of the 2005 student cohort who first enrolled in the 'Other' sector do not articulate to any other sector (82.3% of the 2005 cohort as compared to 80.8% of the 2003 cohort). These are largely American students in the non-award Study Abroad program.

Likewise, there are more VET-only sector students in the 2005 student cohort who first enrolled in the VET sector (68.6%) compared to the corresponding 2003 cohort (60.7%). Further analysis reveals that this is a result of an increasing number of students furthering their studies beyond 'Diploma' level, i.e. to the 'Advanced Diploma' level within this sector. This will be discussed further in the 'Level of study pathways' section.

Between the two cohorts, a higher proportion of the 2005 student cohort who first enrolled in Schools are single-sector students — 80.7% compared to 77.0% of the 2003 cohort. It is found that, on average, about six in ten students do not progress their studies in Australia upon completing school⁹. The remaining 'Schools'-only sector students are most likely still be enrolled in the Schools sector at the end of the tracking period. The relatively short three year tracking periods will not capture the entire study pathways of these students, especially those in the lower year levels. This is evident in the largest change in the proportion of students, as the tracking period is lengthened for a further two years, are in Schools related pathways (see Appendix 1).

The ELICOS sector has by far the lowest proportion of students remaining in the sector by the end of the tracking period, with only one-third of these students doing so. Of all international students who first enrolled in the ELICOS sector on a student visa, between the two cohorts, a slightly higher proportion of the 2003 student cohort are single-sector students – 34.2% compared to 32.6% of the 2005 cohort. As six in ten ELICOS-only sector students conclude their education within 6 months¹⁰, it is likely that this group of students concluded their ELICOS studies within the tracking period and discontinued their education in Australia.

Sectoral pathways of multiple-sector students

As shown in Table 3, one-third of students from both cohorts progress through their studies in more than one sector. Table 6 shows the top 20 multiple-sector pathways for each cohort population.

6

^{9 –} Research Snapshot 41 'Transition to Further Education by International School Students' available on the AEI website at > http://aei.gov.au/AEI/PublicationsAndResearch/Snapshots/41SS08_pdf.pdf

¹⁰ Research Paper 2006/2 'Study Pathways of International Students in Australia through the ELICOS sector, 2002 – 2005' available on the AEI website at > http://aei.dest.gov.au/AEI/PublicationsAndResearch/ResearchPapers/2006 2 Pathway pdf.pdf

Table 6. Multiple-sector international students' top 20 sector pathways

-	2003 commencements		2005 comme	encements
	Prop. of	Ranking	Prop. of	Ranking
Sector pathways	students	2003	students	2005
ELICOS-Higher Education	25.8%	1	24.4%	1
ELICOS-VET	17.4%	2	22.1%	2
VET-Higher Education	10.7%	3	9.5%	3
ELICOS-Schools	9.7%	4	8.3%	4
Other-Higher Education	7.8%	5	7.0%	5
ELICOS-VET-Higher Education	7.0%	6	6.0%	6
Higher Education-VET	1.0%	13	3.2%	7
ELICOS-Other-Higher Education	2.9%	7	2.4%	8
ELICOS-Higher Education-VET	0.8%	14	2.0%	9
ELICOS-Other	1.3%	10	1.5%	10
Schools-Higher Education	2.1%	8	1.3%	11
ELICOS-Schools-VET	1.4%	9	1.1%	12
ELICOS-VET-ELICOS	0.6%	17	0.7%	13
Schools-VET	1.0%	12	0.7%	14
ELICOS-Other-VET	0.7%	15	0.7%	15
Other-VET	0.7%	16	0.7%	16
ELICOS-Higher Education-ELICOS	0.4%	21	0.5%	17
ELICOS-Schools-Higher Education	1.1%	11	0.4%	18
VET-ELICOS-VET	0.1%	38	0.4%	19
Other-VET-Higher Education	0.5%	19	0.4%	20
Other-Schools	0.5%	18	0.3%	25
ELICOS-Schools-Other	0.4%	20	0.3%	27
Other multiple sector pathways	6.2%		6.2%	
Total multiple sector students (number)	34,697		36,814	

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.

There is no change in the ranking of the six most common multi-sectoral pathways between the two cohorts. The top two, and seven of the top ten multi-sectoral pathways for both cohorts began with ELICOS commencements, concurring with the earlier findings that among students who first enrolled in each sector, those in the ELICOS sector are more likely to enrol in a course of study in another sector (see Table 5).

The most popular study pathways are the 'ELICOS-higher education' and the 'ELICOS-VET' with almost half of multiple sector students following either of these two routes. The recent trends for these two pathways are, however, quite different with 'ELICOS-VET' pathway becoming increasing popular (22.1% among 2005 cohort, up from 17.4% among 2003 cohort) while 'ELICOS-higher education' pathway is becoming relatively less popular (24.4% among 2005 cohort, down from 25.8% among 2003 cohort). Other popular pathways include 'VET-higher education', 'ELICOS-Schools' and 'Other-higher education'.

Apart from the 'ELICOS-VET' pathway, two other multi-sectoral pathways have become increasingly popular. They are 'higher education-VET' (rank seventh for 2005 cohort, up from 13th for 2003 cohort) and 'ELICOS-higher education-VET' (rank ninth for 2005 cohort, up from 14th for 2003 cohort) pathways, another indication of an increasing focus by the Australian international education industry on the VET sector.

Sectoral pathways by nationality

Table 7 shows the breakdown of major nationalities for each cohort population.

Table 7. Nationalities of international students

	2	2003 commencem	ents		2005 commencements			
	No. of	No. of	Prop. of	No. of	No. of	Prop. of		
	students	single-sector	single-sector	students	single- sector	single-sector		
Nationality	(rank)	students	students	(rank)	students	students		
China	16,147 (1)	4,416	27.3%	17,081 (1)	4,903	28.7%		
India	6,873 (5)	6,158	89.6%	10,109 (2)	7,870	77.9%		
United States of America	10,280 (2)	10,138	98.6%	9,917 (3)	9,795	98.8%		
Republic of Korea	7,654 (3)	5,027	65.7%	8,564 (4)	5,410	63.2%		
Japan	7,454 (4)	5,188	69.6%	6,283 (5)	4,359	69.4%		
Other nationalities	54,070	36,854	68.2%	51,668	34,471	66.7%		
Total students	102,478	67,781	66.1%	103,622	66,808	64.5%		

Overall, the top five nationalities of international students for both cohorts are similar, i.e. China, India, the USA, the Republic of Korea and Japan. China remains the top nationality for both cohorts (accounting for 16.5% of 2005 cohort population, an increase from 15.8% in 2003 cohort) but India has displaced the USA as the second largest nationality with 9.8% of the 2005 cohort (USA is second among 2003 cohort), up from fifth largest at 6.7% in the 2003 cohort.

Even though overall, two-thirds of each cohort remain in a single sector, this is found to vary among the nationalities. Students from China are more likely to follow a multi-sectoral pathway with about 72% doing so (relatively unchanged for both cohorts) while their counterparts from India and especially the USA, at 22% and 1% respectively, are less likely to.

Sectoral pathways by nationality of single-sector students

Table 8 shows the single-sector students of major nationalities by sector.

Table 8. Top 10 nationalities of single-sector international students (2005 cohort) and their sector of commencements

2003 commencements			2005 commencements		
	No. of	Prop of		No. of	Prop of
No. of Prop of students S	students	student			
Higher Education	1,016	10.0%	Higher Education	832	8.5%
VET	510	5.0%	VET	568	5.8%
ELICOS	7	0.1%	ELICOS	1	0.0%
Schools	73	0.7%	Schools	64	0.7%
Other	8,532	84.2%	Other	8,330	85.0%
Total – Single-sector students from			Total – Single-sector students from		
USA	10,138	100.0%	USA	9,795	100.0%
	No. of	Prop of		No. of	Prop of
<u>India</u>	students	sector		students	sector
Higher Education	5,924	96.2%	Higher Education	6,097	77.5%
VET	187	3.0%	VET	1,662	21.1%
ELICOS	13	0.2%	ELICOS	38	0.5%
Schools	8	0.1%	Schools	15	0.2%
Other	26	0.4%	Other	58	0.7%
Total – Single-sector students from			Total – Single-sector students from	_	
India	6,158	100.0%	India	7,870	100.0%

Table 8. Top 10 nationalities of single-sector international students (2005 cohort) and their sector of commencements (cont)

(cont)			2005 2000000000000000000000000000000000		
2003 commencements	No. of	Prop of	2005 commencements	No. of	Prop of
Republic of Korea	students	sector		students	sector
Republic of Rolen	siuuenis	SECIOI		siuuenis	Sector
Higher Education	423	8.4%	Higher Education	340	6.3%
VET	151	3.0%	VET	358	6.6%
ELICOS	3,338	66.4%	ELICOS	3,644	67.4%
Schools	909	18.1%	Schools	791	14.6%
Other	206	4.1%	Other	277	5.1%
Total – Single-sector students from			Total – Single-sector students from		
Korea	5,027	100.0%	Korea	5,410	100.0%
	,,			,	
	No. of	Prop of		No. of	Prop of
<u>China</u>	students	sector		students	sector
TP 1 P1 (0.545	== 00/	TT 1 T1 0	2 202	(= 00 /
Higher Education	2,517	57.0%	Higher Education	3,283	67.0%
VET	162	3.7%	VET	269	5.5%
ELICOS	493	11.2%	ELICOS	257	5.2%
Schools	1,171	26.5%	Schools	906	18.5%
Other	73	1.7%	Other	188	3.8%
Total – Single-sector students from			Total – Single-sector students from		
China	4,416	100.0%	China	4,903	100.0%
	No. of	Prop of		No. of	Prop of
<u> Iapan</u>	students	sector		students	sector
Higher Education	322	6.2%	Higher Education	246	5.6%
VET	704	13.6%	VET	645	14.8%
ELICOS	3,332	64.2%	ELICOS	2,709	62.1%
Schools	460	8.9%	Schools	358	8.2%
Other	370	7.1%	Other	401	9.2%
Total – Single-sector students from		7.1 /0	Total – Single-sector students from		7.2 /0
Japan	5,188	100.0%	Japan	4,359	100.0%
			· •	•	
	No. of	Prop of			Prop of
<u>Malaysia</u>	students	student		students	student
Higher Education	4,553	85.1%	Higher Education	3,318	83.4%
VET	384	7.2%	VET	378	9.5%
ELICOS	47	0.9%	ELICOS	28	0.7%
Schools	200	3.7%	Schools	155	3.9%
Other			Other	99	
	166	3.1%		99	2.5%
Total – Single-sector students from	F 250	100.00/	Total – Single-sector students from	2.050	100.00/
Malaysia	5,350	100.0%	Malaysia	3,978	100.0%
	No. of	Prop of		No. of	Prop of
Germany	students	sector		students	sector
III dan Edward	422	10.10/	ITal or Floor	5/0	10.00/
Higher Education	466	19.1%	Higher Education	562	18.3%
VET	140	5.7%	VET	142	4.6%
ELICOS	142	5.8%	ELICOS	140	4.6%
Schools	312	12.8%	Schools	441	14.4%
Other	1,380	56.6%	Other	1,786	58.2%
Total – Single-sector students from			Total – Single-sector students from		
Germany	2,440	100.0%	Germany	3,071	100.0%

Table 8. Top 10 nationalities of single-sector international students (2005 cohort) and their sector of commencements (cont)

2003 commencement	S		2005 commencements	3	
	No. of	Prop of		No. of	Prop of
<u>Singapore</u>	students	sector		students	sector
Higher Education	2,708	87.5%	Higher Education	1,920	85.4%
VET	129	4.2%	VET	126	5.6%
ELICOS	3	0.1%	ELICOS	1	0.0%
Schools	147	4.7%	Schools	97	4.3%
Other	108	3.5%	Other	103	4.6%
Total – Single-sector students from		<u>.</u>	Total – Single-sector students from		
Singapore	3,095	100.0%	Singapore	2,247	100.0%
	No. of	Prop of		No. of	Prop of
<u>Brazil</u>	students	sector		students	sector
Higher Education	79	7.0%	Higher Education	56	2.6%
VET	144	12.7%	VET	326	15.0%
ELICOS	680	60.1%	ELICOS	1,512	69.6%
Schools	181	16.0%	Schools	205	9.4%
Other	47	4.2%	Other	73	3.4%
Total – Single-sector students from			Total – Single-sector students from		
Brazil	1,131	100.0%	Brazil	2,172	100.0%
	No. of	Prop of		No. of	Prop of
<u>Canada</u>	students	sector		students	sector
Higher Education	984	55.3%	Higher Education	1,214	56.9%
VET	228	12.8%	VET	293	13.7%
ELICOS	3	0.2%	ELICOS	5	0.2%
Schools	38	2.1%	Schools	26	1.2%
Other	525	29.5%	Other	594	27.9%
Total – Single-sector students from			Total – Single-sector students from		
Canada	1,778	100.0%	Canada	2.132	100.0%

Of the students enrolled in a single sector, the largest nationality is the USA and as a proportion of all single-sector students, is relatively unchanged (14.7% and 15.0% in the 2005 and 2003 cohort populations respectively). The majority of these students are in Australia on the non-award Study Abroad programs and these programs are classified in PRISMS under the 'Other' sector.

The second largest nationality in the 2005 cohort is India at 11.8%, up from 9.1% in the 2003 cohort. In spite of a decrease in the proportion of Indian students remaining in a single sector (77.9% in 2005 cohort, down from 89.6% in 2003 cohort), the larger number of students from India in the 2005 cohort (see Table 7) contributes to this increase. Among the Indian students who remain in a single sector, an increasing proportion of these students are from the VET sector (21.1% in 2005 cohort, up from 3.0% in 2003 cohort) at the expense of the higher education sector (77.5% in 2005 cohort, down from 96.2% in 2003 cohort).

China, although the nationality with the largest proportion of commencements overall in both cohorts, is only rank sixth and fourth in the single-sector cohort for the 2003 and 2005 cohorts respectively, as previously stated, only about 28% of Chinese students remain in one sector of study.

Sectoral pathways by nationality of multiple-sector students

The most common nationalities among multiple sector students from the 2005 cohort are China, the Republic of Korea, Thailand, India and Hong Kong (see Table 9). With the exception of Brazil, the top ten nationalities in the 2005 cohort are similar to those in the 2003 cohort. Similarly, the major multiple sectoral pathways with the exception of India and Thailand, are relatively similar for both cohorts.

The largest proportion of multiple sector students from both cohorts are from China, reflecting its position as the largest contributor of international students attending educational institutions in Australia with three-quarters of these students studying in more than one sector (see Table 7).

Table 9. Top 10 nationalities of multiple-sector students (2005 cohort) and their most common multiple-sector pathways

2003 соттепсете			2005 commencement	nts	
	No. of	Prop of		No. of	Prop of
<u>China</u>	students	sector		students	sector
Total – Single-sector pathway	4,416	27.3%	Total – Single-sector pathway	4,903	28.7%
Multi-sector pathway			Multi-sector pathway		
ELICOS-Higher Education	4,417	27.4%	ELICOS-Higher Education	4,781	28.0%
ELICOS-Schools	2,001	12.4%	ELICOS-Schools	1,686	9.9%
ELICOS-VET-Higher Education	996	6.2%	ELICOS-VET-Higher Education	1,008	5.9%
Other multi-sector pathways	4,317	26.7%	Other multi-sector pathways	4,703	27.5%
Total – Multi-sector pathway	11,731	72.7 %	Total – Multi-sector pathway	12,178	71.3%
Total – Students from China	16,147	100.0%	Total – Students from China	17,081	100.0%
	No. of	Prop of		No. of	Prop of
Republic of Korea	students	sector		students	sector
Total – Single-sector pathway	5,027	65.7%	Total – Single-sector pathway	5,410	63.2%
Multi-sector pathway			Multi-sector pathway		
ELICOS-VET	806	10.5%	ELICOS-VET	1,235	14.4%
ELICOS-Schools	561	7.3%	ELICOS-Schools	494	5.8%
ELICOS-Higher Education	459	6.0%	ELICOS-Higher Education	357	4.2%
Other multi-sector pathways	801	10.5%	Other multi-sector pathways	1,068	12.5%
Total – Multi-sector pathway	2,627	34.3%	Total – Multi-sector pathway	3,154	36.8%
Total – Students from Korea	7,654	100.0%	Total – Students from Korea	8,564	100.0%
	No. of	Prop of		No. of	Prop of
<u>Thailand</u>	students	sector		students	sector
Total – Single-sector pathway	1,715	40.2%	Total – Single-sector pathway	1,484	37.2%
Multi-sector pathway			Multi-sector pathway		
ELICOS-Higher Education	1,049	24.6%	ELICOS-VET	1,155	28.9%
ELICOS-VET	782	18.3%	ELICOS-Higher Education	768	19.2%
ELICOS-VET-Higher Education	144	3.4%	ELICOS-VET-Higher Education	68	1.7%
Other multi-sector pathways	581	13.6%	Other multi-sector pathways	517	13.0%
Total – Multi-sector pathway	2,556	59.8%	Total – Multi-sector pathway	2,508	62.8%
Total – Students from Thailand	4,271	100.0%	Total – Students from Thailand	3,992	100.0%

Table 9. Top 10 nationalities of multiple-sector students (2005 cohort) and their most common multiple-sector

pathways (cont)

2003 commencement	ts		2005 commencement	S	
	No. of	Prop of		No. of	Prop of
<u>India</u>	students	sector		students	sector
Total – Single-sector pathway	6,158	89.6%	Total – Single-sector pathway	7,870	77.9%
<u>Multi-sector pathway</u>			<u>Multi-sector pathway</u>		
ELICOS-Higher Education	344	5.0%	Higher Education-VET	754	7.5%
VET-Higher Education	143	2.1%	ELICOS-Higher Education	492	4.9%
Higher Education-VET	102	1.5%	VET-Higher Education	310	3.1%
Other multi-sector pathways	126	1.8%	Other multi-sector pathways	683	6.8%
Total – Multi-sector pathway	715	10.4%	Total – Multi-sector pathway	2,239	22.1%
Total – Students from India	6,873	100.0%	Total – Students from India	10,109	100.0%
	No. of	Prop of		No. of	Prop of
Hong Kong	students	sector		students	sector
Total – Single-sector pathway	1,369	32.0%	Total – Single-sector pathway	1,055	32.3%
Multi-sector pathway			Multi-sector pathway		
VET-Higher Education	590	13.8%	VET-Higher Education	480	14.7%
Other-Higher Education	501	11.7%	Other-Higher Education	450	13.8%
ELICOS-VET	491	11.5%	ELICOS-VET	373	11.4%
Other multi-sector pathways	1,326	31.0%	Other multi-sector pathways	911	27.9%
Total – Multi-sector pathway	2,908	68.0%	Total – Multi-sector pathway	2,214	67.7%
Total – Students from Hong Kong	4,277	100.0%	Total – Students from Hong Kong	3,269	100.0%
	No. of	Prop of		No. of	Prop of
<u>Japan</u>	students	sector		students	sector
Total – Single-sector pathway	5,188	69.6%	Total – Single-sector pathway	4,359	69.4%
<u>Multi-sector pathway</u>			<u>Multi-sector pathway</u>		
ELICOS-VET	954	12.8%	ELICOS-VET	802	12.8%
ELICOS-Higher Education	316	4.2%	ELICOS-Higher Education	251	4.0%
ELICOS-Schools	174	2.3%	ELICOS-Schools	202	3.2%
Other multi-sector pathways	822	11.0%	Other multi-sector pathways	669	10.6%
Total – Multi-sector pathway	2,266	30.4%	Total – Multi-sector pathway	1,924	30.6%
Total – Students from Japan	7,454	100.0%	Total – Students from Japan	6,283	100.0%
	No. of	Prop of		No. of	Prop of
<u>Indonesia</u>	students	sector		students	sector
Total – Single-sector pathway	1,804	44.1%	Total – Single-sector pathway	1,149	41.8%
<u>Multi-sector pathway</u>			<u>Multi-sector pathway</u>		
VET-Higher Education	579	14.1%	VET-Higher Education	386	14.0%
ELICOS-Higher Education	396	9.7%	ELICOS-Higher Education	315	11.5%
Other-Higher Education	372	9.1%	ELICOS-VET	259	9.4%
Other multi-sector pathways	944	23.1%	Other multi-sector pathways	640	23.3%
Total – Multi-sector pathway	2,291	55.9%	Total – Multi-sector pathway	1,600	58.2%
Total – Students from Indonesia	4,095	100.0%	Total – Students from Indonesia	2.749	100.0%

Table 9. Top 10 nationalities of multiple-sector students (2005 cohort) and their most common multiple-sector

pathways (cont)

2003 commencement	ts		2005 commencement	s	
	No. of	Prop of		No. of	Prop of
<u>Brazil</u>	students	sector		students	sector
Total – Single-sector pathway	1,131	67.4%	Total – Single-sector pathway	2,172	62.6%
<u>Multi-sector pathway</u>			<u>Multi-sector pathway</u>		
ELICOS-VET	409	24.4%	ELICOS-VET	1,053	30.3%
ELICOS-Higher Education	36	2.1%	ELICOS-Higher Education	64	1.8%
ELICOS-VET-Higher Education	15	0.9%	ELICOS-VET-ELICOS	49	1.4%
Other multi-sector pathways	87	5.2%	Other multi-sector pathways	133	3.8%
Total – Multi-sector pathway	547	32.6%	Total – Multi-sector pathway	1,299	37.4%
Total – Students from Brazil	1,678	100.0%	Total – Students from Brazil	3,471	100.0%
	No. of	Prop of		No. of	Prop of
<u>Malaysia</u>	students	sector		students	sector
Total – Single-sector pathway	5,350	79.6%	Total – Single-sector pathway	3,978	78.5%
<u>Multi-sector pathway</u>			<u>Multi-sector pathway</u>		
Other-Higher Education	559	8.3%	Other-Higher Education	431	8.5%
VET-Higher Education	323	4.8%	VET-Higher Education	225	4.4%
Schools-Higher Education	129	1.9%	Schools-Higher Education	102	2.0%
Other multi-sector pathways	364	5.4%	Other multi-sector pathways	334	6.6%
Total – Multi-sector pathway	1,375	20.4%	Total – Multi-sector pathway	1,092	21.5%
Total – Students from Malaysia	6,725	100.0%	Total – Students from Malaysia	5,070	100.0%
	No. of	Prop of		No. of	Prop of
<u>Taiwan</u>	students	sector		students	sector
Total – Single-sector pathway	1,263	51.9%	Total – Single-sector pathway	1,151	52.4%
<u>Multi-sector pathway</u>			<u>Multi-sector pathway</u>		
ELICOS-Higher Education	444	18.3%	ELICOS-Higher Education	453	20.6%
ELICOS-VET	194	8.0%	ELICOS-VET	183	8.3%
ELICOS-VET-Higher Education	125	5.1%	ELICOS-Schools	112	5.1%
Other multi-sector pathways	406	16.7%	Other multi-sector pathways	297	13.5%
Total – Multi-sector pathway	1,169	48.1%	Total – Multi-sector pathway	1,045	47.6%
Total – Students from Taiwan	2.432	100.0%	Total – Students from Taiwan	2.196	100.0%

The growth in the number of students from India, as well as the increasing proportion of these students undertaking multiple sectoral studies (see Table 7), resulted in its ranking moving up from tenth in the 2003 cohort to fourth in the 2005 cohort. The shift away by these Indian students from the higher education to the VET sector, as shown in the increase in the single-sector student proportion in VET-only students and corresponding decrease in higher education-only students (see Table 8), is also evident here. The most common multiple-sector pathway is 'higher education-VET' with 7.5% of all Indian students in the 2005 cohort, up from 1.8% in the 2003 cohort¹¹. This shift, as well as the rapid

¹¹ – The Department will be investigating further the probable circumstances that results in students undertaking the 'higher education-VET' pathway which has increased in popularity in recent years, from 0.3% in 2003 cohort to 1.1% in 2005 cohort (see Table 5).

Study pathways of international students in Australia

increase in the Indian student population, contributes towards Indian students comprising the largest nationality in the VET sector in 2007¹².

Students from Thailand have also shown a shift from the higher education sector towards the VET sector, albeit from a different pathway. The 'ELICOS-VET' pathway is the most popular multi-sectoral pathway with 28.9% of 2005 cohort (up from 18.3% in the 2003 cohort), displacing the previously most popular 'ELICOS-higher education' pathway which fell from 24.6% in the 2003 cohort to 19.2% in the 2005 cohort.

Among the major nationalities, the 'ELICOS-VET' pathway is also the most popular with students in both cohorts from the Republic of Korea, Japan and Brazil. The proportion from the Republic of Korea increase from 10.5% of the 2003 cohort to 14.4% of the 2005 cohort. Similarly, the proportion from Brazil increase from 24.4% of the 2003 cohort to 30.3% of the 2005 cohort while there is no change in the proportion of students from Japan, remaining constant at 12.8% for both cohorts.

The most popular multi-sectoral pathway, the 'ELICOS-higher education' pathway (see Table 6), is among the three most common multi-sectoral pathways for eight of the top ten nationalities for both cohorts, with the exception of Malaysia and Hong Kong. The route is the most popular pathway for students from China and Taiwan and second most popular for students from Thailand, Japan, Indonesia, India and Brazil.

Level of study pathways of single-sector students

As discussed earlier, two-thirds of international students from both cohorts only studied in a single sector in Australia over the tracking duration. This section looks at the level of study pathways of these single-sector students.

Table 10. Single-sector international students' number of level of study commencements

	2005 commencements								
Number of level of study commenced	Higher Education	VET	ELICOS	Schools	Other	Total	Prop. of single-sector cohort		
	Proporti	on of studer	nts from each	level of stud	dy	(no.)			
1	90.7%	75.8%	98.9%	96.4%	100.0%	62,027	92.8%		
2	8.9%	21.1%	1.0%	3.6%	0.0%	4,377	6.6%		
3 or more	0.4%	3.1%	0.1%	0.0%	0.0%	404	0.6%		
Total – Single-sector students (number)	25,224	8,836	13,101	4,038	15,609	66,808	100.0%		

	2003 commencements								
Number of level of study commenced	Higher Education	VET	ELICOS	Schools	Other	Total	Prop. of single-sector cohort		
	Proporti	on of studer	nts from each	level of stud	ły	(no.)			
1	91.8%	79.0%	98.4%	95.7%	100.0%	63,685	94.0%		
2	7.8%	18.2%	1.4%	4.3%	0.0%	3,789	5.6%		
3 or more	0.4%	2.8%	0.1%	0.1%	0.0%	307	0.5%		
Total – Single-sector students (number)	28,711	6,304	13,091	4,720	14,955	67,781	100.0%		

_

 $^{^{12}-}Summary\ of\ International\ Student\ Enrolment\ Data\ for\ December\ 2007\ available\ on\ the\ AEI\ website\ at> \\ \underline{http://aei.dest.gov.au/AEI/MIP/Statistics/StudentEnrolmentAndVisaStatistics/2007/Monthyly\ Sum\ December\ pdf.pdf}$

From Table 10, the large majority of single-sector students remain in the same level of study in which they commenced in, with 92.8% of 2005 cohort doing so, a slight decrease from 94.0% among 2003 cohort. This decrease is mainly a result of the increase in students in the VET sector pursuing more than one level of studies (24.2% in the 2005 cohort compared to 21.0% in the 2003 cohort).

Almost all single-sector students in the ELICOS, Schools and 'Other' sectors remain in the same level of study, the major exception being students progressing from the primary school studies to the secondary school studies in the Schools sector.

The other two single-sector student groups, the higher education-only and the VET-only student groups, will be examined further.

Level of study pathways of higher education-only sector students

Table 11 shows the most popular single and multi level of study pathways for higher education-only sector students.

Table 11. Higher education-only international students' most common level of study pathways

2003 commencements			2005 commencements				
	No. of	Prop of		No. of	Prop of		
	students	sector		students	sector		
Single level of study pathway							
Bachelor Degree	12,898	44.9%	Masters Degree (Coursework)	10,483	41.6%		
Masters Degree (Coursework)	11,319	39.4%	Bachelor Degree	10,397	41.2%		
Doctoral Degree	1,016	3.5%	Doctoral Degree	978	3.9%		
Other single level of study pathway	1,118	3.9%	Other single level of study pathway	1,020	4.0%		
Total – Single level of study pathway	26,351	91.8%	Total – Single level of study pathway	22,878	90.7%		
Multi level of study pathways							
Graduate Diploma-Masters Degree			Graduate Diploma-Masters Degree				
(Coursework)	763	2.7%	(Coursework)	664	2.6%		
Bachelor Degree-Masters Degree			Bachelor Degree-Masters Degree				
(Coursework)	572	2.0%	(Coursework)	578	2.3%		
Other multiple level of study pathway	1,025	3.6%	Other multiple level of study pathway	1,104	4.4%		
Total – Multi level of study pathway	2,360	8.2%	Total – Multi level of study pathway	2,346	9.3%		
Total – Higher education-only students	28,711	100.0%	Total – Higher education-only students	25,224	100.0%		

As shown in Table 11, nine in ten higher education-only students remain in the same level of study throughout the tracking period. Of these students, for both cohorts, nine in ten undertook either a Bachelor Degree or a Masters Degree by Coursework. There is, however, a slight shift in popularity between these two most popular level of study pathways being undertaken, with increasing proportion of students undertaking a Masters Degree by Coursework (41.6% in the 2005 cohort, up from 39.4% in the 2003 cohort), primarily at the expense of the Bachelor Degree (41.2% in the 2005 cohort, down from 44.9% in the 2003 cohort).

Multi level of study pathways among higher education-only students is not common with less than one in ten students from both cohorts attempting to do so. The most popular of these pathways are 'Graduate Diploma-Masters Degree (Coursework)' and 'Bachelor Degree-Masters Degree (Coursework)'.

Level of study pathways of VET-only sector students

Table 12 shows the most popular single and multi level of study pathways for VET-only sector students.

As shown in Table 12, 75.8% of the VET-only students remain in the same level of study throughout the tracking period for the 2005 cohort, a decrease from 79.0% in the 2003 cohort. The most popular single level of study pathway is 'Diploma'. However, the proportion of students undertaking Diploma courses has decreased from 40.1% in the 2003 cohort to 35.5% in the 2005 cohort. The decrease in the proportion undertaking a Diploma in the later cohort has seen increases in the proportion of students undertaking Advanced Diploma (18.5% in 2005 cohort, up from 9.2% in 2003 cohort), resulting in Advanced Diploma being the second most popular level of study for the later cohort (up from fourth in 2003 cohort).

Table 12. VET-only international students' most common level of study pathways

2003 commencements			2005 commencements		
	No. of	Prop of		No. of	Prop of
	students	sector		students	sector
Single level of study pathway					
Diploma	2,525	40.1%	Diploma	3,139	35.5%
Certificate III	960	15.2%	Advanced Diploma	1,632	18.5%
Certificate IV	630	10.0%	Certificate III	1,037	11.7%
Other single level of study pathway	864	13.7%	Other single level of study pathway	886	10.0%
Total – Single level of study pathway	4,979	79.0%	Total – Single level of study pathway	6,694	75.8%
Multi level of study pathways					
Diploma-Advanced Diploma	253	4.0%	Diploma-Advanced Diploma	325	3.7%
Certificate IV-Diploma	228	3.6%	Certificate IV-Diploma	292	3.3%
Other multiple level of study pathway	844	13.4%	Other multiple level of study pathway	1,525	17.3%
Total – Multi level of study pathway	1,325	21.0%	Total – Multi level of study pathway	2,142	24.2%
Total – VET-only students	6,304	100.0%	Total – VET-only students	8,836	100.0%

Appendix 1 - Methodology used for this research paper

The tracking period for a student's study pathway is the time period over which a sequence of his/her commencements is recorded. The beginning date of the tracking period is taken as the date of the student's first commencement in a course of study in Australia. The ending date is an arbitrary date that allows the tracking duration to be long enough to show the full picture of the study pathways taken. Nonetheless, this time frame may not necessarily cover the entire period of study for some students, for example, those who take an extended break between different courses of study.

Table 13 shows the top 20 sector pathways for the 2003 student cohort (i.e. all students who commenced in 2003) tracked over two different period lengths, over three and five years.

Table 13. International students' top 20 sector pathways (including single sector) over a three year or a

five year tracking duration

	2003 сотте	encements	2003 commencements (tracked till 31 Dec 2007)		
	(tracked till 31	1 Dec 2005)			
•	Prop. of				
Sector combinations	students	Ranking	Prop. of students	Ranking	
Higher Education	28.0%	1	27.8%	1	
Other	14.6%	2	14.4%	2	
ELICOS	12.8%	3	12.4%	3	
ELICOS-Higher Education	8.7%	4	8.6%	4	
VET	6.2%	5	5.8%	5	
ELICOS-VET	5.9%	6	5.2%	6	
Schools	4.6%	7	3.3%	8	
VET-Higher Education	3.6%	8	3.8%	7	
ELICOS-Schools	3.3%	9	1.2%	13	
Other-Higher Education	2.7%	10	2.7%	10	
ELICOS-VET-Higher Education	2.4%	11	2.9%	9	
ELICOS-Other-Higher Education	1.0%	12	1.0%	14	
Schools-Higher Education	0.7%	13	1.4%	11	
ELICOS-Schools-VET	0.5%	14	0.9%	15	
ELICOS-Other	0.4%	15	0.3%	20	
ELICOS-Schools-Higher Education	0.4%	16	1.3%	12	
Schools-VET	0.3%	17	0.5%	16	
Higher Education-VET	0.3%	18	0.5%	18	
ELICOS-Higher Education-VET	0.3%	19	0.5%	17	
ELICOS-Other-VET	0.2%	20	0.1%	31	
ELICOS-Schools-VET-Higher Education	0.0%	42	0.5%	19	
Other sector pathways	3.1%		4.9%		
Total international students (number)	102,478	••	102,478		

From Table 13, there is no change within the order of the top six inter-sectoral pathways (who accounts for three-quarters of 2003 cohort) when the tracking period is increased by two years. The differences in the student proportion (as a proportion of 2003 cohort) in each of the top 20 sector pathways are minimal, with 18 of the 20 inter-sectoral pathways having less than 1.0% difference. The remaining two inter-sectoral pathways, the 'Schools' and 'ELICOS-Schools' record decreases of 1.3% and 2.1%, most likely a result of these students pursuing further education upon completing school education.

The minimal change in 18 of the 20 inter-sectoral pathways shows that the tracking duration of three years of study is adequate to reveal clear inter-sectoral pathways. This tracking duration will be used to determine the study pathways of international students in this study.