

# **Academic performance for international postgraduate coursework students with reference to their English language entry type and proficiency at admission.**

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## **Abstract**

When looking at practical issues and solutions concerning English language entry standards for international postgraduate coursework (IPC) students everyone has an opinion. It is often suggested that a higher IELTS score equals a better outcome. Whilst acknowledging academic outcomes as a measure are complex and there are many extraneous variables impacting on success, an analysis was performed examining academic outcomes for IPC students. The research examined for IPC students the relationship between English language entry type and academic performance at university as measured by grade point average (GPA).

An IPC cohort studying at an Australian university consisting of 331 students was used. For the cohort a mean overall IELTS and subtest scores were generally above the cut-off score of 6.0. The exception was in the writing subtest with an overall mean of 5.9. Among the cohort most students also achieved an overall GPA of pass or higher. While few failed, they were more likely to do so if they were from the IELTS / TOEFL entry types.

When program outcomes 'successful completion' and 'non-completion' were considered it was evident that 85.4 % completed successfully. There were no significant differences in mean overall IELTS or subtest scores between IPC students who completed successfully and those who did not.

Using the current research cohort as a model, the effect of raising the IELTS entry score to postgraduate coursework programs is discussed.

## **Current Context**

Over the past 10 years, Australian universities have seen rapid growth in international student numbers studying on-shore. Enrolments were over 164 500 in 2004, providing Australian universities with over 15% of their revenue (DEST 2005).

In relation to international postgraduate coursework (IPC) students, universities in Australia have set aggressive growth targets. As an example, targets have been set to achieve a 110% increase in the international postgraduate coursework fee-based student load (EFTSU) from 2003 to 2008 at the university used in this study.

Many staff within universities state concerns around the English language proficiency of international students. Lesk, Ciccaelli and Benzie (2004, p.17) point out that these concerns are "*based on the need to ensure a level of English proficiency on entry that gives students a fair chance of success in their studies*". Given these moves towards increased growth there is surprisingly limited research investigating the relationship between English language proficiency at admission and the academic performance of IPC students.

### **Glossary of Terms**

DEST – Department of Education Science and Training.

ELP – English Language Program; used to describe a brief program available to students who fall just short of the English Language entry requirements.

EFTSU – Effective full time student unit (used by the government as a statistical reporting measure, based on student load).

GPA – Grade Point Average (a definition of the calculation used appears in this report)

IPC – International postgraduate coursework students

IELTS – International English Language testing System

TOEFL – Test of English as a Foreign Language

### **Literature Review**

With increasing numbers of students choosing to study abroad, institutions worldwide are keen to better understand the factors that contribute to the successful adjustment and academic progress of international foreign language students. One current area of interest for researchers in English speaking countries is the relationship between English language proficiency and academic success.

Coley's (1999) broad survey of Australian universities' requirements for English language proficiency found great diversity in what universities consider as evidence for language proficiency, and that different universities also had different acceptance levels for the same evidence. Consequently, Coley argued that universities each needed to carry out their own research to answer questions about requirements. The research reviewed for this project has been chosen as indicative of the variety of queries in such investigations.

Looking at undergraduate students at Curtin University of Technology, Dooley (1999) found that there was no conclusive evidence to establish a relationship between higher IELTS scores and academic success, although the reading subtest had the strongest correlation with academic achievement. Higher levels of language proficiency were found to be less significant in predicting academic success than other factors, and there was no evidence that students who did not meet Curtin's minimum entry criteria would fail academically.

At the University of Tasmania, Cotton et al (1998) also found a weak but positive association between the IELTS reading and writing subtests and academic performance; however, there were 'low or negative' associations between the other subtests and academic success, and between the overall IELTS score and academic success.

Cronin's 2003 study focused on the possible relationship between English and academic entry levels and subsequent academic performance by looking at undergraduate international students who had failed several subjects at Victoria University of Wellington (VUW), New Zealand. It revealed that 22% of students (n=339) met the English language entry criteria with IELTS scores; of these, 18% failed two or more subjects. Higher proportions of students entering VUW with other entry types failed two or more subjects: 20% of international students who had met their English requirements by completing their schooling within the New Zealand school system; and 20% of the international students who had undertaken an English Proficiency Programme at VUW to meet their English language requirements.

At Macquarie University, Brooks and Adams (2002) focused on students' levels of spoken English and their academic performance, and found that international students used spoken

English less frequently than did local students, and that the academic performance of international students was also not as high as that of local students. This result, they clarified, was inconclusive: it did ‘not demonstrate a causal relationship’, although it did ‘demonstrate a clear parallel, and suggests that there may well be a connection’.

Deumert et.al (2005) assert that over 30% of international students they had interviewed articulated they had experienced problems with academic English, but highlight that there were major variations by nation of origin. Few students from India and South East Asia, yet around 61% of students from China, reported difficulties with academic English.

In contrast, Feast (2002) at the University of South Australia found a significant and positive (albeit weak) relationship between overall IELTS scores and students’ GPAs. The research canvassed options for raising the overall IELTS scores for both undergraduate and postgraduate students. With respect to postgraduate students, Feast investigated the impact of English language proficiency as measured by the IELTS on GPA and student numbers using six different entry criteria:

- an overall IELTS or equivalent score of 7.0
- each subtest score at least 7.0 regardless of overall score
- writing and reading subtests at least 7.0 and overall score at least 7.0
- overall IELTS at least 6.5
- each subtest score at least 6.0 regardless of overall score
- writing and reading subtests at least 6.0 and overall score at least 6.5

Feast concluded that if there were a desire to raise the English language entry requirement at the University of South Australia (then set at an overall score equivalent to 6.0), then the criteria ‘writing and reading subtest scores at least 6.0 and overall score at least 6.5’ would be the preferred method. The other methods were dismissed primarily because they resulted in an unacceptably high student loss rate for GPA increases and/or because of complexity of administration.

If adopted at the University of South Australia, Feast’s results for postgraduate students indicated that there would be a loss of almost 70% of international students for a GPA gain of just over 4%. Feast also stressed the ‘difficulty of generalising findings from previous studies’ due to the ‘limitations of these studies’. Feast’s study supports the need for individual universities to undertake their own research on the relationship between students’ English proficiency and their academic performance.

### **Research Aims**

The research aims of the study were to investigate the academic performance and outcomes for IPC students with reference to their English language entry type and proficiency at admission.

For the purposes of this study six separate categories of English language proficiency are used (and are referred to throughout the paper as ‘English language entry types’ or ‘entry types’). These categories are based on the types of proof provided to the University to establish English language proficiency. The six English language entry types used in this study are listed below and can be broadly conceptualised into two distinct groups. The first grouping (types 1-3) represents standardised measures of English language proficiency based on

testing. The second grouping (types 4-6) represents different measures of linguistic and educational history in English from which a level of English competence or proficiency is assumed.

*Standardised measures based on testing*

- Type 1. IELTS - the International English Language Testing System
- Type 2. TOEFL – the Test of English as a Foreign Language. It is important to note that TOEFL scores have been converted to an overall IELTS equivalency score for the purpose of this study.
- Type 3. IELTS or TOEFL plus a English Language Program (ELP). Entry with a conditional requirement to undertake and pass a specialised English Program, such as an Pre-enrolment English Program (ELP)

*English competence assumed*

- Type 4. English is first language
- Type 5. 2/5 English – at least two of the student’s past five years of study were conducted in the English language.
- Type 6. English medium – the student has studied in the English language medium for at least five years in Australia, New Zealand, the United Kingdom, Canada, the United States of America, South Africa or the Republic of Ireland

**Research Questions**

The research is designed to investigate the following questions:

- (1) What is the relationship between English language entry type (IELTS, TOEFL, English medium, 2/5 study, English first language speakers) of IPC students and their academic performance at university as measured by GPA?
- (2) What is the relationship between English language proficiency (as measured by IELTS or IELTS equivalent scores)<sup>1</sup> of IPC students and their academic performance at university as measured by GPA?

These two questions are intended to provide information that can assist in answering the final research question:

- (3) What are the advantages in terms of academic outcomes as measured by GPA in raising the current minimum IELTS overall entry score of 6.0 for international postgraduate coursework programs.

**Data Collection**

Research data was collected for IPC students. All data were collected from University student records. Electronic data management systems, other staff electronic records and central student files were used as sources of data.

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<sup>1</sup> IELTS equivalent overall scores were calculated for students who had entered with TOEFL scores.

To establish the data pool for (IPC) students the following cohorts were used:

2001: intakes from Semesters 1 and 2 and Trimesters 1, 2 and 3

2002: intakes from Semesters 1 and 2 and Trimesters 1, 2 and 3

2003: intakes from Semester 1 and Trimester 1

The data used here in the study was originally collected for a research investigation in late 2003 and early 2004. It was used to compile an internal report making recommendation to various committees concerning English language entry levels for postgraduate students at the university concerned. The original report included research students as well as IPC students and had a much wider focus. The current project utilises the IPC subset of data collected in the original project. This data subset was updated in June 2005, student overall GPAs were updated, GPA for new study periods included where appropriate.

Grade point average (GPA) was used as a measure of performance for the students because they are subjected to ongoing assessment, allowing the establishment of a data pool of students who commenced their postgraduate coursework programs between 2001 to 2003.

Files were not available for 26 (7.5%) of the (IPC) student cohort. Missing data for students excluded from the database included: language entry type, scores for language proficiency tests and subtests.

IPC students studying Dentistry are given a non-graded pass (or fail) for all courses. Thus they were excluded from analysis that involved grade point averages, although they were not excluded from other descriptive statistics. (IPC) students in Dentistry numbered 21 (6.3%). Four coursework students began and completed one program, and then began another. Only the first course commenced was used for the purposes of this report.

Data was entered into a Microsoft Excel worksheet. For the purpose of reporting the data was then analysed using the statistical software package SPSS.

### **Student demographics**

The data comprised records for 331 postgraduate coursework students.

*Sex:* Male = 171 (51.7%)  
Female = 160 (48.38%)

*Age range:* 21.1 to 53.5 years with a mean of 28.8

The largest group of the coursework cohort (18.8%) came from China. In all, 195 coursework students (58.2%) came from Eastern or South-East Asia. Overall the cohort came from 46 countries with the top ten being: China (18.8%); Malaysia (10.1%); India (8.1%); United States (8.1%); Japan (7.5%); Indonesia (5.4%); Singapore (3.6%); Thailand (3.6%); United Kingdom (3.6%); Hong Kong (3.3%)

Table 1 highlights the Australian Federal government's Department of Education, Science and Training (DEST) broad fields of study categories and the IPC student representation in each group.

**Table 1: DEST broad fields of study categories for the 2001–03 international postgraduate coursework student cohort**

DEST Broad Field of Study	N	%
Management and Commerce	127	38.4
Information Technology	40	12.1
Health	37	11.2
Society and Culture	34	10.3
Agriculture, Environmental and Related Studies	33	10.0
Education	22	6.6
Architecture and Building	21	6.3
Engineering and Related Technologies	10	3.0
Natural and Physical Sciences	5	1.5
Creative Arts	2	0.6
Total	331	100.0

**English Language Entry Type**

The entry types for coursework are shown in Table 2. Around half (152; 45.9%) of the coursework students demonstrated their English language proficiency through IELTS or TOEFL testing. Of this group 19 (5.7%) had undertaken the ELP, a Pre-Enrolment English Program.

It is noteworthy that 89 (27%) of the postgraduate coursework student cohort had significant English skills prior to admission; either as their first language, language experience or previous study in English.

**Table 2: Entry type for the international postgraduate coursework student cohort**

Entry type	N	%
IELTS	77	23.3
TOEFL*	56	16.9
IELTS/TOEFL plus ELP**	19	5.7
2 of last 5 years study were in English	24	7.3
English medium	26	7.9
English is first language	39	11.8
Not known	89	26.9
Other	1	.3
Total	331	100.0

\*Note: TOEFL scores are converted to their IELTS equivalent for most of the study; however, it is useful to keep them separate at this stage of the data description as students

admitted on the basis of TOEFL scores do not have individual band scores, as for the IELTS subtest measures of reading, writing, speaking and listening.

**\*\*Note:** Selected postgraduate international students receive English language support from the University’s language development programs before enrolment in their courses. Since 1999 the University has made available an ELP; a program available to all undergraduate and postgraduate students from language backgrounds other than English. The ELP can provide an alternative entry pathway for prospective students who have not met the minimum English language proficiency requirements to the University. On successful completion, these students are granted direct entry into the University. 43 coursework students (12.9%) undertook an ELP, most of them doing a 5 or a 10-week program. This represented 23% of students who had entered with IELTS or TOEFL scores.

**Students with IELTS or IELTS equivalent entry scores**

The IELTS test provides individual subtest (band) scores for reading, writing, speaking and listening, as well as providing an overall score. For IPC students, scores for the four subtests were available for 89 students (23.3%). Overall IELTS scores for the IELTS students and equivalent scores for TOEFL-admitted students (calculated from the TOEFL scores) were available for 152 coursework students. A conversion table enabled TOEFL scores to be calculated in terms of IELTS equivalency. For coursework students this increased the sample size in the analysis to 152 students with an overall IELTS score. There is no conversion for any subtest scores equivalence between IELTS and TOFEL

The mean scores for the two groups of students are reported in Tables 3

**Table 3: IELTS or equivalent scores: coursework student cohort**

IELTS or equivalent overall score	Number of students
5.0	5
5.5	16
6.0	45
6.5	39
7.0	35
7.5	7
8.0	3
8.5	2
<b>Total</b>	<b>152</b>

Table 3 provides an overview for IPC students in the 2001–03 cohort who had IELTS or equivalent scores (56% of the total).

**Table 4: Mean IELTS scores for the coursework student cohort**

	Mean	SD	Range
Overall IELTS or equivalent score (n=152)	6.4	0.67	5.0–8.5
Writing (n=89)	5.9	0.89	4.0–8.0
Reading (n=89)	6.3	0.87	4.5–8.5
Speaking (n=89)	6.3	0.99	5.0–8.0
Listening (n=89)	6.2	0.94	4.0–8.5

The mean subtest scores for coursework students were 5.9 or higher, with students achieving the lowest score on the writing subtest. Tables 3 and 4 illustrate the distribution of scores for the overall IELTS or equivalent test, showing that the median score was 6.4. It is worth noting the range in the subtests, that which is discussed later.

Since there were significant numbers of IPC students undertaking business programs among the international students who had undertaken the IELTS tests (28; 24.8%), their higher entry score requirement (6.5) may have skewed the IELTS score results for the whole sample. The mean scores are calculated for IPC business students and for all other IPC students separately (Table 5).

**Table 5: Mean IELTS scores: business and other coursework students**

	Business Students		Other Coursework Students	
	Mean	SD	Mean	SD
Overall IELTS or equivalent score	6.6	0.51	6.2	0.60
Writing	6.5	0.65	5.9	0.89
Reading	6.8	0.75	6.2	0.80
Speaking	6.8	0.88	6.2	0.92
Listening	6.8	0.80	6.1	0.92

Note: There were 42 business students and 110 enrolled in other postgraduate coursework programs for whom the IELTS or equivalent score was available; subtest scores were available for 28 business students and 83 students doing other courses

The business students had a significantly higher IELTS score on all the subtests and on the overall test. They could be expected to have higher scores because their entry requirement score was higher (6.5). With the business students removed, it can be seen that the mean score for the writing subtest for other students fell below the cut-off score of 6.0 (range 4.0–8.0).



### Program status

Information was collected as to whether students had completed their study program, were continuing or were 'incomplete'; that is, they had failed or withdrawn for other reasons and had not completed their course (Table 6).

**Table 6: Stage of program for the 2001–03 coursework students**

	Coursework students	
	Frequency	Per cent
Completed	278	84.0%
Incomplete	27	8.0%
Continuing	26	8.0%
Total	331	100%

As at June 2005, 84% of the IPC cohort had successfully finished their programs with 8% of IPC students continuing their study and another 8% having withdrawn or failed.

DEST (2004) data on attrition rates provides a useful comparison. Attrition rates for the University used in the study are reported for both domestic and international students. An example of attrition is given to help define the use of the term by DEST(2004, p.2), *students who were enrolled in an award course in 2002 were not enrolled at that University in an award course in 2003, and their non enrolment was not due to the completion of their course in 2002*. This matches the definition of non completion used in this research.

The DEST reported data for 2001 and 2002 is combined and states that 22.3% of domestic postgraduate students did not complete their programs.

### English language entry type and performance.

Specific attention and further analysis is undertaken for those students who entered through standardised test (IELTS and TOFEL), again using GPA as a measure of academic performance.

### Grade Point Average

The grade point average (GPA) data were available for coursework students for the semesters or trimesters (study periods) of their enrolment, as well as their overall GPA. Scores could range from 0 to 7:

High distinction	7.0
Distinction	6.0
Credit	5.0
Pass I	4.5
Pass, Pass II	4.0
Conceded pass	3.0
Fail	1.5
Withdraw fail	0.0

Scores were available for between 1 and 8 study periods. Dentistry students (n=21) were eligible only for non-graded passes and so they were excluded from this part of the analysis. Study period 1 was the first semester or trimester students studied in their program, study period 2 the second, and so on. Mean GPA scores for the first six study periods for IPC students are presented in table 7. There were few students with scores for study periods 7 to 8, and so these scores are not reported.

**Table 7: Mean grade point average scores for the 2001–03 coursework student cohort for six study periods, and overall GPA score**

Mean grade point average	N	Mean	SD
Study period 1	324	4.91	1.03
Study period 2	300	5.01	1.01
Study period 3	229	5.18	0.90
Study period 4	143	5.11	0.68
Study period 5	64	5.03	0.92
Study period 6	11	5.05	0.53
Overall GPA (up to 8 study periods)	324	5.01	0.97

There are some limitations when interpreting this data. It is problematic to compare the mean GPA scores for the different study periods as each study period after the first is represented by a smaller group. In addition, no account has been taken here of programs of different lengths, so that a student with a GPA in study period 5, for example, may be studying a long program, or they may be taking longer for a number of other reasons.

Overall GPA was recoded into score categories and the distribution is presented in Table 8.

**Table 8: Distribution of overall GPA for IPC students**

GPA score	Frequency	Per cent %
6.5 – 7.0	16	4.9
5.5 – 6.4	79	24.6
4.5 – 5.4	161	50.4
3.5 – 4.4	48	14.8
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2.5 – 3.4	6	1.9
1.5 – 2.4	9	2.8
0 – 1.4	2	0.6
Total	321	100.0

Note: Scores above the dotted line are categorised as passes.

The median overall grade point average was around a credit. Students scoring below 3.5 are considered to be ‘at risk’ of failure as defined by the University. This categorisation is not

necessarily fixed or accurate, but it serves to enable the data to be discussed. An example of the usefulness of this categorisation is that 5.3% of the coursework students were likely to have failed over 50% of the courses they were enrolled in.

### English language Entry Type and GPA

The mean grade point averages for study periods 1 to 6 and the English language entry type are presented in Table 9.

**Table 9: Mean GPA scores for six study periods, and overall GPA score, for IPC students of different English language entry types**

Entry type	Study period 1 (n=321)	Study period 2 (n=290)	Study period 3 (n=206)	Study period 4 (n=141)	Study period 5 (n=63)	Study period 6 (n=10)	Overall GPA score (n=326)
IELTS	4.8	5.1	5.2	5.2	5.0	4.9	5.0
TOEFL	4.6	4.8	5.0	4.7	5.0	4.8	4.8
IELTS/TOEFL plus ELP	4.3	4.7	4.5	4.8	4.5	-	4.4
2 of 5 years study English	4.9	5.2	5.3	5.1	4.8	5.0	4.9
English medium	5.8	5.8	6.0	5.7	5.3	3.0	5.8
English is first language	5.4	5.4	5.6	5.2	5.3	6.0	5.4
Other	5.1	5.2	5.3	5.3	5.1	5.3	5.1

As can be seen from Table 9, there were differences between the students dependent on entry types. If your entry was based on an English Medium entry type the average overall GPA was 5.8 compared to average overall GPA scores of 4.4 for those who entered through the ELP program, 4.8 for TOEFL and 5.0 for IELTS.

It is useful to collapse the six English language entry types used in this study into the two distinct groups. The first grouping types 1-3 represents standardised measures of English language proficiency based on testing and the second grouping types 4-6 represents different measures of linguistic and educational history in English from which a level of English competence or proficiency is assumed.

The IPC students who were admitted based on English language proficiency based on testing had an overall mean GPA of 4.83.

The IPC students who were admitted based on measures of linguistic and educational history in English from which a level of English competence or proficiency is assumed had an overall mean GPA of 5.17, which is 0.63 of a GPA point higher.

Few students of any entry type failed. To investigate this further, a crosstabulation was carried out between categorised scores for overall GPA and language entry type (Table 10).

**Table 10: Distribution of categorised GPA scores for IPC students of different English language entry types**

GPA	IELTS %	TOEFL %	IELTS/TOEFL + PEP %	English medium %	2/5 English %	English 1st language %
6.5–7.0	1.1	3.5	2.8	7.1	3.0	4.3
5.5–6.499	27.3	28.1	13.9	17.9	33.3	38.3
4.5–5.499	53.4	28.1	52.8	60.7	45.5	44.7
3.5–4.499	9.1	33.3	22.2	14.3	12.1	12.8
2.5–3.499	5.7	3.5	2.8	0.0	0.0	0.0
1.5–2.499	3.4	1.8	5.6	0.0	3.0	0.0
1.0–1.499	0.0	1.8	0.0	0.0	3.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0

Note: Scores above the dotted line are categorised as passes.

Table 10 demonstrates that, while few students failed, they were more likely to fail if they were from the IELTS / TOEFL groups. Caution must be used when generalising these results, as the number of failing students is very small overall.

Significant differences in GPA between the entry type groups in study periods 1 and 2 require further exploration. If a student has not been admitted via a standardised test then the English language entry type distinguishes, to an extent, international students' English language ability when they begin study but does not measure it directly. It might be expected that GPA scores of the different groups would become more similar with study experience in Australia, and this may be part of the reason why the differences among the language entry groups after study period 2 were not significant. But the significant differences in GPA between the entry type groups in study periods 1 and 2 suggest that something is happening that may be beneficial.

The research does not investigate what post-enrolment support programs for the IELTS and TOEFL groups are. They may be academic support or social support. The higher failure rate among IELTS / TOEFL entry groups (using overall GPA) also suggests that English language proficiency may be an important factor for these groups during their study in Australia. It would be interesting to retest students and see what results IELTS tests would produce after their first and second study periods.

### English Language Proficiency and GPA

The relationship between the English language proficiency scores at entry among the groups of IPC students who were admitted to the University via the IELTS / TOEFL path and their grade point averages was explored next.

Pearson correlation calculations were carried out between these students' overall GPA scores and their IELTS or equivalent overall score and the scores for the individual subtests (Table 11).

**Table 11: Correlations between overall GPA scores of the 2001–03 coursework student cohort and their IELTS or equivalent overall score and the scores for the individual subtests**

IELTS test	Pearson correlation	Sig. (2-tailed)
IELTS or equiv score	0.150*	0.050
Read band score	0.217*	0.024
Listen band score	0.181	0.060
Write band score	0.065	0.503
Speak band score	0.056	0.561

Note: \* The correlation is significant at the 0.05 level (2-tailed).

There was a significant positive relationship between the students' mean GPA scores and their IELTS or equivalent entry score and the score for the reading subtest. In other words the higher a student's entry scores on the reading subtest and the overall IELTS test, the higher their overall GPA was likely to be.

Correlations were also calculated between IELTS overall scores and the GPA scores for study periods 1 to 5. The only significant correlation between overall IELTS or equivalent entry score and GPA for the individual study periods was for study period 2 ( $r = 0.19$ ;  $p = 0.04$ ).

Thus for IELTS / TOEFL-admitted students there were weak positive linear relationships between overall IELTS or equivalent score and overall GPA, between overall IELTS or equivalent score and GPA for study period 2, and between the IELTS reading subtest score and overall GPA.

Another question of interest for this project is: if the IELTS or equivalent entry score were raised to 6.5 overall, would this result in improved GPA scores?

Table 12 provides an overview for the IELTS / TOEFL-admitted students among the coursework student cohort.

The mean GPA scores among IELTS / TOEFL admitted students with entry scores above and below 6.5 were almost the same. On these figures, raising the entry score for these groups of students could improve their grade point averages by 0.4. Put another way, leaving the entry score at 6.0 would not result in significantly lower grade point averages. If the IELTS equivalent entry score is 6.0 it can be seen that 21 students would need to enter via alternative means such as the ELP or study further English and resit an IELTS test. If the entry score is 6.5, 47 students would be denied direct entry. If the entry score is 7.0, 86 students would be denied direct entry.

**Table 12: The coursework students mean GPA scores and their IELTS or equivalent score**

IELTS or equivalent overall score	N	Mean GPA	Mean GPA above and below 6.5
5.0	5	4.7	} 4.7
5.5	16	4.6	
6.0	45	4.7	
6.5	39	4.9	} 5.1
7.0	35	4.9	
7.5	7	5.4	
8.0	3	5.1	
8.5	2	5.6*	
Total	152	4.8	

\*Note: For the two students with an IELTS score of 8.5, one students' GPA was a perfect 7.0 and the other 4.3.

In order to distinguish between the outcomes of students with IELTS scores below the required score of 6.0, with the required score of 6.0, and with score of 6.5 or above, a crosstabulation was carried out between the IELTS overall score and outcomes (Table 13).

**Table 13: Outcomes for students with different IELTS entry scores among the IPC student cohort who were no longer enrolled at June 2005**

IELTS or equivalent overall score	n	Complete	Continuing	Incomplete
5.0	5	5 (100%)	-	-
5.5	16	11(68.8%)	2 (12.5%)	3 (18.7%)
6.0	45	37(82.2%)	3 (6.6%)	5 (11.2%)
6.5	39	35(89.7%)	1(2.6%)	3(7.7%)
7.0	35	29 (82.8%)	2(5.8%)	4(11.4%)
7.5	7	7(100%)	-	-
8.0	3	3 (100%)	-	-
8.5	2	1(50%)	1(50%)	-
Total	152	128 (84.2%)	9 (5.9%)	15 (9.9%)

While none of the differences were statistically significant and the numbers of non-successes were small, this finding suggests that IELTS / TOEFL-admitted students with entry scores below 7.5 may need extra support.

If we compare Table 13 with Table 11 we can make the following observations. Students entering with an IELTS score of 6.0 had a rate of successful completion of 75.0%, compared with an overall completion rate for the whole cohort of 85.4%. It could be predicted using our

data, and using the current coursework cohort as a guide, that an IELTS entry score of 6.5 or above could raise the successful completion rate of students entering with an IELTS test to 86.7%, which is 1.2% higher than the current overall completion rate. This assumes that all students with IELTS scores below 6.5 would be excluded, which is not the case with the current cut-off score of 6.0. A more realistic suggestion from the data might be that students with lower English language proficiency scores at entry need more support than those with higher scores.

The figures in Table 13 are also instructive when considered in a different way. At entry scores 6.0 and below, 73.5% of the students were successful, and at entry scores of 6.5 or higher, 13.3% of students were not successful. Overall, 40 per cent of non-completions were among entry scores of 6.5 and higher. Hence, raising the entry score above 6.0 might eliminate more potentially successful students than potential failures, while retaining some that might not be successful. Clearly there is much more to success and failure than the English language proficiency scores with which students enter the University.

Overall, the IELTS categories represent only about half of the IPC students in this study, and the outcomes of students entering via other pathways have not been considered in this discussion. Many variables other than entry score will impact on the success or otherwise of international students. For example, a changing country of origin for the majority of the University's international student cohort alone will have an impact because the student population represented in this study will not be the same as that in the future.

### **Summary of Postgraduate Coursework Findings**

Mean overall IELTS equivalent and subtest scores were generally above the cut-off score of 6.0. The exception was in the writing subtest, for which coursework students (with Adelaide Graduate School of Business students excluded) had a mean score of 5.9.

Among the coursework student cohort most students (93.5%) achieved an overall GPA of pass or higher. While few failed they were more likely to do so if they were from the IELTS / TOEFL entry types.

In the first two study periods, the mean GPA scores for coursework students whose first language was English were significantly higher than those for students who had entered via the IELTS or TOEFL path.

In the first study period, students with an 'English medium' entry type had a mean GPA score significantly higher than students who had entered with IELTS or TOEFL.

For students who entered via a IELTS / TOEFL path there is some evidence of a positive linear relationships between:

- overall IELTS or equivalent score and overall GPA,
- overall IELTS or equivalent score and GPA for the second study period, and
- the IELTS reading subtest score and overall GPA.

The mean GPA scores for students with IELTS or equivalent entry scores above and below 6.5 were almost the same. Based on the sample size and results, one could assume leaving the entry score at 6.0 would not necessarily result in significantly lower grade point averages.

When program outcomes 'successful completion' and 'non-completion' were considered it was evident that 140 students (85.4 %) completed successfully. (NB: students who remained currently enrolled (n=171) were excluded from the analysis in relation to program outcomes).

When looking at the rates of non-completion by entry type, close to one-quarter of the IELTS and IELTS / TOEFL plus ELP groups did not complete successfully, but the non-success rate for TOEFL-admitted students (11.4%) was similar to that for the English medium (10.5%) and 2/5 English (11.5%) groups. Caution must be used when interpreting these results as the overall non-completion rate (14.6%) is based on a total of 24 students. There were no significant differences in mean overall IELTS or subtest scores between coursework students who completed successfully and those who did not.

Using the current coursework cohort as a guide, it could be suggested that raising the IELTS entry score to 6.5 would raise the successful completion rate of students entering with an IELTS test to 86.7%, which is 1.2% higher than the current overall completion rate for all entry types. It was worth noting however, 40 per cent of non-completions were among entry scores of 6.5 and higher.

### **Discussion**

Entry standards need foremost to be viewed from the perspective of maintaining academic standards and high quality outcomes for students whilst also achieving future postgraduate student recruitment targets.

The relationship between English language proficiency at admission and the academic performance of IPC students is only one area of many that needs consideration and continual evaluation.

The project's main outcomes and strengths are that it has provided insight into, and laid the foundation for, the University to explore many other related questions. In addition it has provided a context in which the issues concerning the need to balance recruitment targets with high-quality outcomes for students can be discussed.

In this study, standardised test results such as IELTS or TOEFL were provided by 152 (45.9%) of IPC students as proof of English language proficiency. It is anticipated that with increasing student numbers from countries such as China, the number of students providing evidence of English language proficiency through IELTS will increase. Therefore a review of the entry standards as measured by IELTS is important for all universities.

Currently there is much debate as to whether an overall IELTS score of 6.0 provides sufficient English proficiency on entry to give IPC students a fair chance of success. There are a significant group of people at the University used in the current study suggesting English proficiency is a key, thus asserting an increase to an overall IELTS score of 6.5 is warranted. This research shows, however, that if the IELTS or equivalent entry score were raised to 6.5 overall, there would be little significant gain in GPAs. On these figures, raising the entry score for these groups of students could improve their grade point averages by 0.4. Put another way, leaving the entry score at 6.0 would result in similar grade point averages.

Raising the cut-off score from 6.0 to 6.5 would require alternative pathways for or deny entry to 46% of students among the current IPC student cohort who entered the University via a language test path. Hence raising the entry score above 6.0 might eliminate more potentially successful students than potential failures, while retaining some that might not be successful.

For the IPC student cohort who had done an IELTS or equivalent test, there was a relationship between students' English language proficiency at entry – for the overall IELTS or equivalent score and for the academic reading subtest – and their performance (GPA). The subtests for academic writing, speaking and listening did not show such a relationship. There was no



significant relationship between the IELTS entry scores and program outcome i.e successful completion or non-completion.

Given the relationship between GPA and the reading subtest the research supports that consideration should be given by universities to adopt a minimum band requirement in the academic reading subtest to 6.0.

### **Future Directions**

As stated earlier, one of this research projects strengths is that it has laid the foundation to explore other issues. It has been suggested in this report that factors not considered in the analysis are also likely to be important contributors to the performance and outcomes of international postgraduate students. For examples some of the data collected contains factors / information that were not analysed due to the scope of the project. Examples of these factors include: gender, country of origin, previous qualification, discipline, study program, length of program and age at commencement of study.

In addition to factors for which data was collected but no analysis conducted, there are many factors that influence international students' success that have not been considered in the study, such as increasing numbers of students from different regions and levels of post-enrolment support. Another factor that could not be explored was the extent to which IPC students were similar to or different from the cohorts of all students on the variables measured.

The levels and types of support received by international postgraduate students during their study are likely to significantly influence performance and outcomes. Higher levels of effective support may result in higher performance levels among international students. Information about support received at institution, faculty/discipline or school level for the development of English language proficiency is not consistently available from University records. It is desirable to understand more fully the types and levels of support, and their effect, in order to understand more clearly the effect of English language proficiency at entry. The cost of such support (that is, its cost effectiveness) is another consideration.

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## Appendices

### Appendix 1:

#### *Current English language requirements*

In Australia the Department of Immigration, Multicultural and Indigenous Affairs (DIMIA) has instituted numerous changes to English language requirements and visa sub-class categories in recent years.<sup>2</sup> The majority of changes were introduced in July 2001; however, minor amendments to the student visa program have continued since that date. The current DIMIA (2004) regulations state:

International students applying for a student visa (sub class 573 – Higher Education) and coming from countries which are designated category 3 or 4 by the Department of Immigration and Multicultural Affairs are required to meet the following English language entry requirements. Students may take the International English Language Testing System (IELTS) test or the Occupational English Test (OET).

The only exception to this is for students applying for a visa from a country that is approved to conduct a Test of English as a Foreign Language (TOEFL).<sup>3</sup>

The current IELTS entry scores required for a student visa are:

5.0 IELTS with a preliminary 30-week maximum ELICOS course, or

5.5 IELTS with a one-year foundation studies course, or

6.0 IELTS

There are three circumstances in which students do not have to meet the above requirements:

If they can provide evidence that they have studied in the English language medium for at least 5 years in any one or more of the following countries: Australia, New Zealand, the United Kingdom, Canada, the United States, South Africa and the Republic of Ireland.

If their education and stay in Australia will be fully funded by either an agency of their national government, a multilateral agency (for example, the United Nations, the World Bank or the Asian Development Bank) or an agency of the Commonwealth of Australia (for example, the Department of Education, Science and Training or any Australian state or territory government)

If they are in Australia and are applying for a further student visa, and show evidence that they have, not more than two years before the visa application date:

Successfully completed the requirements for a Senior Secondary Certificate of Education in Australia conducted in the English language, or

Studied full-time in Australia as the holder of a student visa, in the English language, towards a qualification from the Australian Qualifications Framework (AQF) at Certificate IV level or higher

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<sup>2</sup> These are the requirements as determined by DIMIA  
[[http://www.immi.gov.au/study/applying/visa\\_requirements\\_english.htm](http://www.immi.gov.au/study/applying/visa_requirements_english.htm), accessed 30 May 2005]

<sup>3</sup> Student visa applicants in the following countries may take the TOEFL instead of the IELTS: Belarus, Ecuador, El Salvador, Guatemala, Honduras, Kyrgyzstan, Mali, Moldova, Solomon Islands, Suriname, Tajikistan, Tanzania, Uganda and Uzbekistan.

## Appendix 2:

### *The IELTS test*

IELTS comprises several subtests (modules), which are scored separately, and the overall IELTS score is calculated from the subtest scores. The modules for universities are:

Listening

Academic Reading

Academic Writing, and

Speaking

Possible scores range from band 9 (expert user) to band 1 (non-user). For the purpose of this study, bands 7 to 5 are of interest.

At present the University sets the minimum level of English proficiency for direct entry into postgraduate programs at an overall IELTS score equivalent to 6.0. Exceptions are for entry into Business programs, where an overall score of 6.5 is required; Public Health programs, which require an overall score of 6.5; and programs within the Law School, which require an overall score of 7.0.

### IELTS band description

Band 9: Expert User	Has fully operational command of the language: appropriate, accurate and fluent with complete understanding.
Band 8: Very Good User	Has fully operational command of the language with only occasional unsystematic inaccuracies and inappropriacies. Misunderstandings
Band 7: Good User	Has operational command of the language though with occasional inaccuracies, inappropriacies and misunderstandings in some situations. Generally handles complex language well and understands detailed reasoning.
Band 6: Competent User	Has generally effective command of the language despite some inaccuracies, inappropriacies and misunderstandings. Can use fairly complex language, particularly in familiar situations.
Band 5: Modest User	Has partial command of the language, coping with overall meaning in most situations, though is likely to make many mistakes. Should be able to handle basic communication in own field.
Band 4: Limited User	Basic competence is limited to familiar situations. Have frequent problems in understanding and expression. Is not able to use complex language.
Band 3: Extremely Limited User	Conveys and understands only general meaning in very familiar situations. Frequent breakdowns in communication occur.
Band 2: Intermittent User	No real communication is possible except for the most basic information using isolated words or short formulae in familiar situations and to meet immediate needs. Has great difficulty in understanding spoken and written English.
Band 1: Non-user	Essentially has no ability to use the language beyond possibly a few isolated words.