The impact of pre-entry English test results on postgraduate success

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Abstract

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This research investigates the attainment of international postgraduate students against the four elements (reading, writing, listening and speaking) of their pre-entry International English Language Testing System (IELTS) scores. A significant association was found between test score and degree classification, with reading being the most closely correlated element; but a low correlation between all elements and degree attainment suggests that other factors had a greater impact on success. Attendance at academic skills centres was found have the greatest benefit to those with higher IELTS entry scores. The paper goes on to advise caution in the use of IELTS score thresholds as entry criteria.

Presentation

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Introduction
The fast changing nature of the way in which higher education is financed in England, with an important source now generally coming from student fees rather than government grants, means that it is more important than ever for students to be able to choose the right course and for universities to choose the right students. The cost of failure is high for both parties. It is widely recognised that, in addition to financial benefits, international students enrich the academic and social lives of all students and contribute to the international character of an institution (QAA, 2012; Universities UK, 2011).

International students from non EU countries account for some 12% of those studying at English Universities; at undergraduate level in terms of degree classification they tend to perform less well than British students and are a far better represented in postgraduate, than in undergraduate studies (HESA, 2012). Most postgraduate Masters courses only run for a single year and have a high workload, it is therefore important to understand and address the specific issues facing this group and to provide effective support. To ensure the best academic success for international students who face the challenge of adaptation to what may be an unfamiliar learning and teaching environment, universities need to address a range of challenges in addition to ensuring their language capability including, setting appropriate admission requirements, identifying students at risk and providing academic and language support (Hirsh, 2007).

Proficiency in written and spoken English is clearly advantageous for those enrolled to study at English universities (Suja, Yacob, & Mohammed, 2012) and there are a number of recognised tests including Test Of English as a Foreign Language (TOEFL), and Pearson Test of English PTE (Academic). The test considered in this study is the most commonly used and well established as an entry criterion for entry to UK universities the International English Language Testing System (IELTS) (Green, 2005; IEAA, 2007a). It is owned by three partners: the British Council, IELTS Australia and Cambridge English Language Assessment (IELTS, 2011). Two types of test are offered, an Academic Module, which emphasises discursive, analytic and factual use of English, and is recommended for test takers who wish to enter an English speaking HEI and a requirement for this university; and a General Training Module which is designed to test English for use on a day to day basis (IELTS, 2011) but is not generally acceptable for university entry. The tests consist of four elements: listening, reading, writing and speaking and is based on a 9 band scoring system from 1 "non user" up to 9 "expert user". Participants receive an overall score and one for each element. Guidance by IELTS to educational institutions advises a minimum band score of 6.5, or 7 for more linguistically demanding academic courses (IELTS, 2011).

One of the main advantages of IELTS, and similar tests, for admission purposes is that they offer an independent standardised measure of English proficiency which is expressed in numerical values that can be compared and benchmarked (IEAA, 2007a) . However, there are a number of difficulties around the interpretation and generalizability of the IELTS scores in an academic context including:

- The psychometric precision of the test is contested and variation in student ability are found despite similar scores (IEAA, 2007a).

- As the test undergoes regular revisions, the value of band scores as an admission criterion needs to be adjust accordingly (e.g. Hirsh, 2007; IEAA, 2007a).

- IELTS admission thresholds do 'not necessarily mean the student is equipped with the skills required to undertake formal study' in HE (Hirsh, 2007; IEAA, 2007a). This is highlighted in a case study by Ingram & Byliss (2007, p. 2) which showed that 'there was no apparent relationship between IELTS scores and student performance in course-related tasks'.

- The meaning of the IELTS scores is not always well communicated or understood by stakeholders and might be confused for an indicator of general intellectual ability (IEAA, 2007a; Phakiti, 2008; Seelen, 2002).

- The results have no bearing on motivation, learning preferences and attitude towards critical thinking; an important issue for many programmes as international students may differ greatly in their approaches to learning as a result of their prior experience. Or as Ballard and Clanchy (1997) state it: "Many of the difficulties international students experience in their study derive not from 'poor English' (though lack of language competence is in many cases a real problem), but from a clash of educational cultures" (cited in Biggs, 2003, p. 122).

- While the tests might predict academic English proficiency up to a point, there are worries that the language context of some disciplinary subjects can be very metaphor and jargon rich and convey implicit and nuanced meaning that might be difficult to frame and predict with the test scores (Turner, 2007).

Nevertheless, it is important to note that the IELTS test seeks to 'provide a valid and accurate assessment' of the language skills of test takers, which can be used as an indicator for admission purposes, but makes no claims concerning general academic ability or performance (IELTS, 2011). The relationship between language proficiency and academic ability and success is clearly complex as a report of the Australian National Symposium English Language Competence of International Students concludes:

> "The influence of English language competence on future academic performance is not well understood and the current research evidence is sparse and equivocal. While there is little doubt that language competence is an important factor in future academic success, multiple factors, including different cultural and pedagogical approaches to learning, clearly are in operation" (IEAA, 2007b, p. 11).

Reviews of the literature around the relationship between IELTS scores and academic success have found the connection between IELTS scores and academic performance to be weak or non-existent e.g. Bayliss & Ingram (2006) and Hirsh (2007). Phakiti (2008) found that the strength of the association between the IELTS band scores and academic performance varied between R^2=7% and R^2= 29%. Some HEIs are known to set both a minimum overall band criterion and minimum mark on one or more of the bands, particularly writing, to ensure a better match with the programme. But, such requirements are difficult to justify as the few studies which have investigated the effects of the individual IELTS elements found that reading was the strongest predictor of academic performance (c.f. Hirsh, 2007; Phakiti, 2008).

While, most HEI have set minimum IELTS band score criteria for courses, often in line with the IELTS (2011) recommendations, alternative pathways to enter universities do exist (IEAA, 2007a; Ingram & Bayliss, 2007). Students who cannot meet the requirement are still offered places under the condition of pre sessional or additional English support (Hirsh, 2007; IEAA, 2007a). A study by Green (2005) concludes that gains in proficiency can be made through additional English training with most occurring in a relative short time span for students with lower band scores.

This research explores the relationship between the level of spoken and written English of international postgraduate students studying language intensive courses, success in terms of degree qualification and outcome, and the impact of additional academic support. The students were enrolled on one year taught masters courses at an English university and their English proficiency on entry measured with the IELTS Academic English module test. The usefulness of each element of the test score as a criterion for admission is examined.

Method and findings

A quantitative approach, applying univariate and bivariate analysis techniques to attendance and attainment data, was chosen to explore the relationship between the reading, writing, listening and speaking and overall IELTS test scores, additional support and degree attainment of postgraduates studying on single year Masters courses within the business and humanities faculties in the 2010/11 academic year.

The individual records of 200 international postgraduate students (excluding those from EU countries) were analysed using Excel and SPSS statistical software. Data from the following fields were used:

- IELTS overall score at entry and the score for the individual IELTS elements Listening, Reading, Writing and Speaking.

- Final degree award classification

- Final award overall mark

- Number of visits to the academic skill centre, designed to support their on course attainment

Some students chose to take the course over two or more years or not to complete the masters programme and leave with one of the lower level qualifications. Table 1 shows the distribution of final grades.

Degree attainment in 2011 – Table 1

Grade	n
1 Distinction (Masters)	11
2 Commendation (Masters)	70
3 Pass (Masters)	75
4 Postgraduate Diploma	2
5 Postgraduate Certificate	16
6 PG credit	3
7 Not completed	16
8 Fail	7
Total	200

IELTS scores

All international students on postgraduate degree courses are required to have a UK upper second class or equivalent degree qualification for entry to the programme. Most faculties and programmes at the institution set an IELTS overall threshold of 6.5 often with a minimum of 6.0 in "Writing". Some programmes which require a strong understanding of the English, such as Journalism and English literature, require an IELTS overall score of 7.0. However, students may sometimes be admitted with lower scores if they agree to undertake, and satisfactorily complete, a pre-sessional English course. Figure 1 shows the near normal distribution of scores.

IELTS scores on entry to postgraduate masters courses – Figure 1
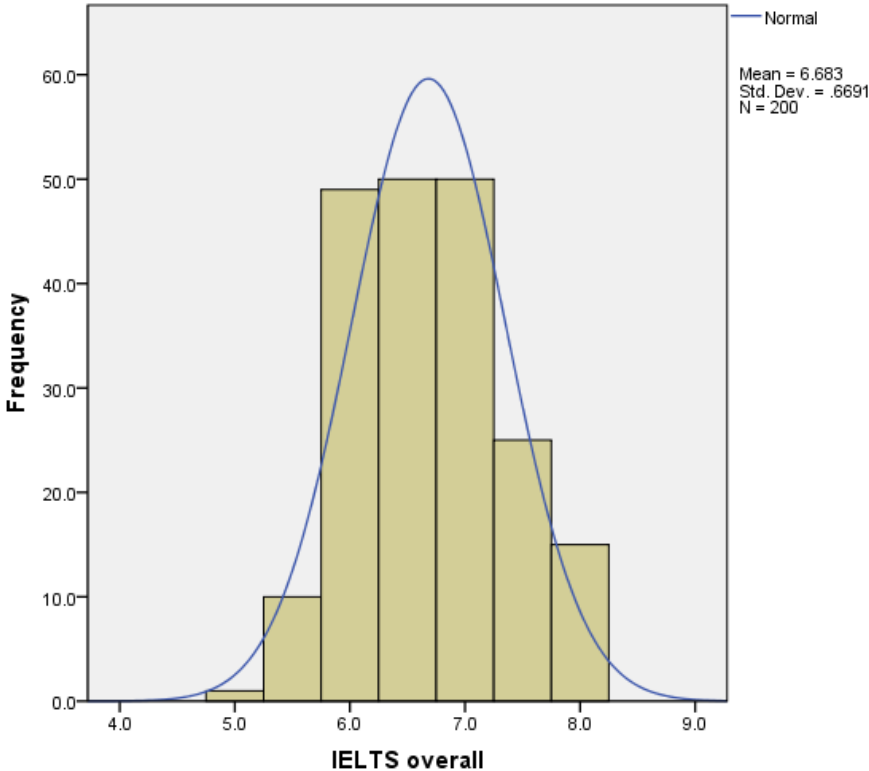
To ensure consistency, only those students who successfully completed the course with a pass, commendation or distinction are considered further here.

IELTS element scores and outcome for master programme completions

The overall degree classifications and the overall marks, used in part to calculate the classification, are examined in terms of their association with the pre entry IELTS score for each IELTS element.

Proportion of students achieving a commendation or distinction classification against IELTS score on entry – Table 2

IELTS element	IELTS score			χ^2	P
	Low <6.5	Med 6.5 or 7	High >7		
Overall	41.7%	48.1%	77.4%	10.558	0.005
Writing	40.0%	71.1%	68.8%	13.862	0.001
Reading	37.1%	57.4%	71.8%	12.870	0.002
Listening	37.5%	52.5%	65.3%	7.525	0.023
Speaking	36.5%	52.5%	68.9%	10.128	0.006

Table 2 illustrates the strong association ($P < 0.05$) for all elements of the IELTS between entry score and achievement of a commendation or distinction. A greater proportion of those with the highest IELTS scores obtained the best degree classifications.

Correlation and regression

To illustrate the degree of scatter between IELTS score and outcome, the final programme mark is plotted in Figure 2 against the "Reading" element score, with which it had the highest correlation.

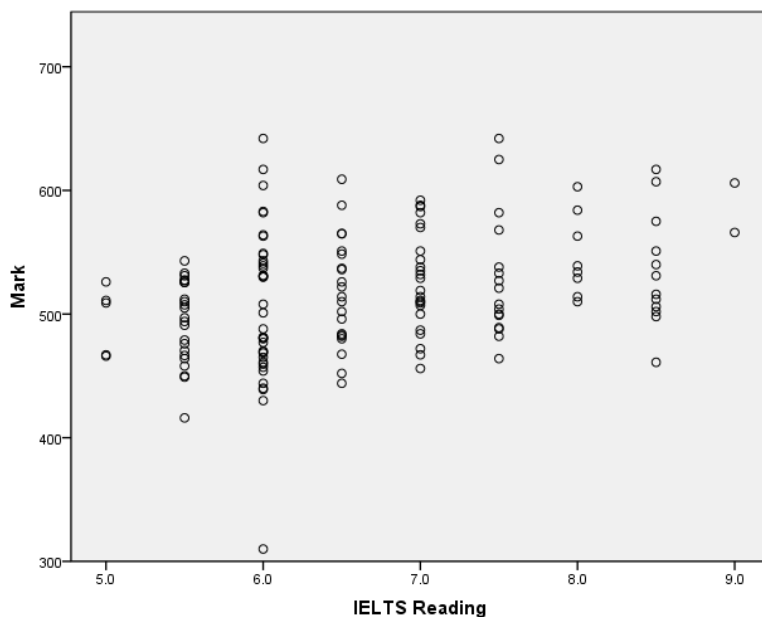**Association of final degree mark with IELTS scores – Figure 2**

Table 3 quantifies the correlation for each element and gives a measure of where this represents a significant relationship ($p < 0.05$).

Correlation of IELTS score and final degree mark – Table 3

| IELTS element	r^2	P
Overall	**3.7%**	**0.018**
Reading	**10.9%**	**0.000**
Speaking	*1.3%*	*0.168*
Listening	*2.2%*	*0.070*
Writing	*1.3%*	*0.072*

The data illustrates that only the Reading and Overall IELTS scores were a significantly associated with the final degree mark ($p < 0.05$) and that Reading had by far the highest correlation with 10.9% of the increase in final mark associated with increase in the IELTS reading score. It should be noted here that the degree classification is not solely based on final degree mark but incorporates other factors including resubmitted assignments, mitigating circumstances, academic misconduct and deferrals.

To explore whether combinations of the test elements might be used to enable an improved prediction of the final mark, a step wise multiple linear regression was carried out. No model could be found in which each of the IELTS elements, other than IELTS Reading, significantly accounted for some of the variation in the marks, indicating that no better correlation could be found this way.

Figure 3 shows that the IELTS overall scores of the students who failed, exited the program with a postgraduate certificate/diploma or with postgraduate credits, is normally distributed around a mean of 6.6,

and includes high and low marks. It is known that students do not complete for a variety of reasons which are often not academic e.g. financial, family crisis, health and, although not fully explored here, this outcome suggests that there is not a relationship between the IELTS band scores and non-completion of the masters programme.

IELTS Scores of non completing postgraduate masters programme entrants – Figure 3
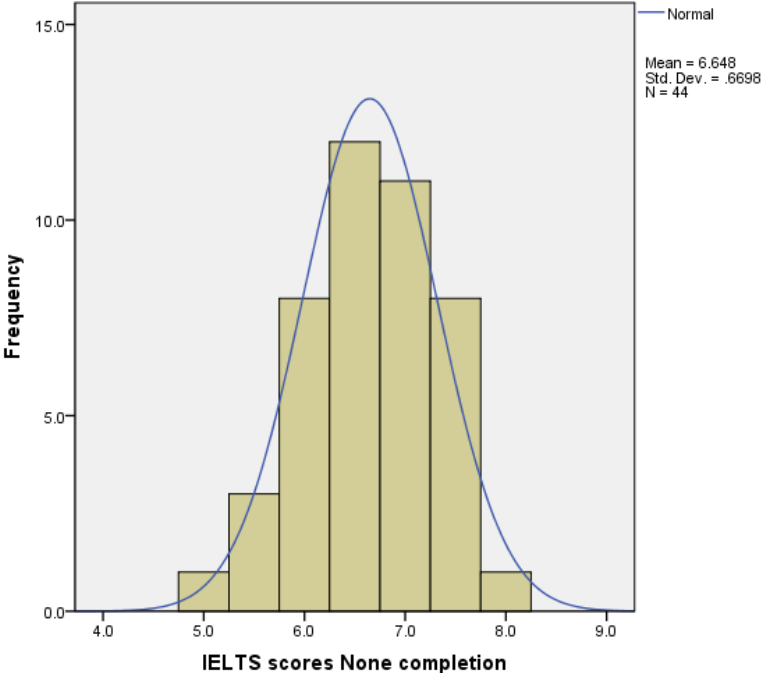
Additional support

The institution provides a range of mechanisms to support its students including individual tutorials, facilitation of peer learning, pre-sessional and in-sessional English classes. Academic Skills Centres are also in place with the objective of raising the attainment level of all students by providing access to flexible supportive learning environment (see Allibone, May, & van der Sluis, 2013). Table 4 shows the different outcomes for attendees and non attendees at each IELTS entry level.

Students who visited the Academic Skills Centre at least once – Table 4

Overall IELTS:	Low <6.5				Med 6.5 or 7				High >7			
	ASC		Non ASC		ASC		Non ASC		ASC		Non ASC	
Degree class	n	%	n	%	n	%	n	%	n	%	n	%
Distinction or Commendation	5	36%	16	46%	10	63%	26	43%	4	100%	19	73%
Pass	9	64%	19	54%	6	38%	34	57%	0	0%	7	27%

Although the numbers involved are too low to draw firm conclusions, this data suggests that those students who made at least one visit to an ASC and had medium or high overall IELTS scores achieved better outcomes than non attendees while this was not the case for those with lower scores.

Discussion

The data illustrates that for non EU postgraduates, effective understanding and communication is associated with improved attainment. The findings concur with those published elsewhere that IELTS is a weak predictor of performance but it is nevertheless the case that those with the highest scores were more likely to achieve the best degrees.

It is notable that a relationship was not found between any of the measured skills and final marks of students who obtained a qualification below masters level or failed; in these cases particularly, other variables will be more influential in predicting outcome. Ongoing further exploration at this institution is working towards quantification of additional outcome predictors. Hirsh (2007) and Phakiti (2008) point out that truncating the data, as was done here so that the regression analysis considered only participants who successfully completed the programme, is likely to limit the generalizability of the results. We concur with this but consider it outweighed by the better reliability achieved through limiting the data variables. A second issue is that the non attending groups against which the Academic Skills Centre cohorts were measured had chosen not to attend, bringing into question their validity as a comparator.

Differing levels of language proficiency need are likely to vary the impact of IELTS scores on attainment between the masters programmes. Bespoke tests by discipline might be the most appropriate to test for the nuances of language used in each case (Turner 2007). These and other points are summed up by Bayliss & Ingram (2006, p.1).

> "Considering the many variables that influence academic success and the fact that IELTS measures only language proficiency, it is not surprising that attempts to correlate test scores with subsequent academic results have been inconsistent in their outcomes"

There is little published on the relationship between each IELTS element and attainment but what there is concurs with our finding that reading score is the best indicator (Hirsh, 2007; Phakiti, 2008).

The evidence that academic skills support appears to be less beneficial to those with poorer English raises the question of whether provision of language support in a the academic skills setting would help these students. Hirsh (2007) points out that 'value-added' support can enrich the learning process, while Allibone, May & van der Sluis (2013) find that the flexibility and student centeredness of academic skills centres tend to improve student retention and success.

The preference for the IELTS test because it is standardised and validated is understandable and sets a clear target for applicants but we argue it appears to be of limited value as a predictor of outcome and so should be weighted accordingly.

Other less standardised measures such as interview performance may prove better predictors. Given the high fees and institutional reputation involved, this and other options should be considered. This research starts to make a case for focusing on the Reading score in particular both to increase the likelihood of a better grade and enable the students to obtain greater benefits from Academic Skills Centre Support. There is certainly scope for additional research to further illuminate the relationship between IELTS element test scores and attainment.

Conclusions

The initial finding of a broad association between degree classification and IELTS score gives a basis for use of IELTS in setting entry criteria, however; the high degree of scatter and insignificant correlation between the "speaking", "listening" and "writing" elements and final degree mark highlight the danger of too much reliance on these as an entry criterion.

Acknowledgement

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