



WHAT HAPPENS TO INTERNATIONAL STUDENTS' ENGLISH AFTER ONE SEMESTER AT UNIVERSITY?

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There is a common expectation, particularly amongst international students, that studying in an English-medium university should automatically produce a significant improvement in their English language skills. However, there is growing evidence to suggest that this is not necessarily the case.

This paper reports on a study which investigated the impact of one semester of study at a university on the English language proficiency of a sample of 40 international students. This was measured by comparing the students' scores on a diagnostic English language test at the beginning and end of their first semester. A comparison of discourse measures of writing in terms of fluency, complexity and accuracy was also undertaken. Background information, including details of ESL support, if any, was collected for all participants via questionnaires, and interviews were conducted with a subset of the participants.

It was found that studying in an English-medium university generally led to an improvement in English language proficiency. The paper identifies a number of factors which appear to support language development, as well as factors that may inhibit it.

INTRODUCTION

In recent years there has been a dramatic increase in the number of international students in Australian universities. As a result, in some faculties of the University of Melbourne, non-native speakers of English make up almost 50% of the total enrolments.

While there may be many reasons why these students choose to study in an English-medium university, there is a common expectation that this will produce a significant improvement in students' English language skills. This assumption is supported by research that has identified the requirements for successful second language learning: meaningful language input, 'pushed' output, and the opportunity to receive feedback on output (Gass 2003). Studying in an English medium university seems to satisfy these requirements. However, the extent to which there is improvement is likely to vary according to students' circumstances. Indeed, a recent study found that in the year 2005–2006, 34 per cent of the 12,116 international students graduating from Australian universities surveyed did not have the English standard needed for admission to university, let alone to graduate (Birrell 2006). Indeed, for these reasons the University of Melbourne has flagged the English Language Proficiency (ELP) of international students as an area of major concern.

The present study was set up to investigate whether studying in an English-medium university for one semester has an impact on the English language proficiency (ELP) of international students. In this study the impact on English language skills was investigated using results on reading and writing tests and written discourse measures. In addition, questionnaire and interview data were used to investigate a number of variables (including English language support) which previous research had shown to have an impact on students' language proficiency.

There have been a number of studies investigating the relationship between English language tuition and scores on tests of academic English. However, those studies which have investigated gain scores on IELTS following IELTS preparation courses have produced somewhat mixed results, possibly due to variations in sample size and course duration. For example, in a small-scale ($n=17$) study in New Zealand, Read and Hays (2003) found that gains made by the students following one month of an IELTS preparation course were not statistically significant. In a large-scale study ($n=476$) Green and Weir (2003) found that, on average, students' scores only increased by 0.21 of a band (from an average of score of 5.27 to 5.48) following 3–12 weeks of intensive IELTS preparation and English for Academic Purposes type courses. Retrospective studies based on results from candidates who had taken IELTS on more than one occasion over varying intervals of time (Gardiner 1999, Green and Weir 2002, 2003) produced similar results.

In contrast, Elder and O'Loughlin (2003) found that 10-12 weeks of intensive English language courses in Australia and New Zealand (n=112) resulted in a significant improvement in English language proficiency, with students on average increasing their IELTS score by half a band. They found that the improvement was greatest on the Listening subtest, and gains were likely to be greater for students with low initial ELP. They also found that a range of personal, instructional and environmental factors were linked to these improved scores, but that these factors varied from one language skill to another. However, Elder and O'Loughlin (2003) suggest the need for caution in interpreting these results, as these studies are measuring *average* gains, and individual performance is highly variable.

In contrast to these previous studies, which involved students enrolled in test preparation courses or intensive English language instruction prior to admission to university courses, the focus of the present study is on whether, and to what extent, international students' language develops in the course of regular university studies.

STUDY DESIGN

The study was based on a test - re-test design. Participants took a diagnostic English test (DELA) at the beginning and end of semester in 2004, and completed a questionnaire. A subset of these students also volunteered for interviews. All participants were paid for their participation.

PARTICIPANTS

Thirty-nine international students, predominantly from South East Asia (the source of most of the University's international students), agreed to participate in the study. The majority (29) spoke a variety of Chinese as their first language. Of these, about a third (14) had accessed some kind of ESL support (an ESL credit subject or not for credit workshops or individual tutorials) during their first semester. Fifteen students had completed some form of study in Australia (year 12 or foundation year) prior to entering the university. As all students enrolling at the university must fulfil certain English language requirements, and only a subset of these are directed to diagnostic English language assessment, the participants represent a fairly narrow range of proficiency from intermediate to upper-intermediate (e.g., overall IELTS scores in the range of 6.5-7). A large number of the participants (27) were postgraduate students, mainly from the Faculties of Economics/Commerce and Engineering. These two faculties tend to have the largest number of international students.

THE DIAGNOSTIC ENGLISH LANGUAGE ASSESSMENT (DELA)

All students entering the University of Melbourne must demonstrate a requisite level of ELP, and most international students take the IELTS. As IELTS scores may be up to 2 years old at entry, they may not always provide an accurate measure of the current status of the student's ELP. Furthermore, IELTS entry scores are set at what is considered to be the minimum level necessary to cope with university studies. So while a score of IELTS 7 is sufficient to gain entry to most university courses, students at this level are still likely to benefit from further English language support. For this reason the University provides a free diagnostic English language assessment (DELA) to newly enrolled international students on the basis of their IELTS and/or year 12 results. For example, students who score below 7 on IELTS are strongly recommended to sit the diagnostic test.

The Diagnostic English Language Assessment (DELA) is a professionally validated test of English language proficiency. Designed specifically for the university context, it comprises subtests in listening, reading and writing. Scores on each subtest are reported on a scale of 1 to 9, with 9 representing an advanced level of proficiency. Scores on the reading and listening test are converted to a band score on a scale of 1 to 9. The writing subtest is assessed on the criteria of Fluency, Content and Form (vocabulary and grammatical accuracy). For each of these three criteria the student receives a score of 1 to 9 (using a descriptive scale), and the three scores are then averaged to yield a single writing score. The DELA results are used to generate recommendations regarding the type of language support, if any, the student is likely to need. Students identified as requiring substantial language support (e.g., DELA scores of 6 or below on two of the subtests) are recommended to enrol in credit-bearing ESL subjects offered by the School of Languages. Students who require less intensive support are directed to workshops and individual tutorials offered by the central and faculty-based language and learning support units. Uptake of recommended ESL support is not mandatory, but may be taken into account in the event of unsatisfactory progress.

DATA COLLECTION

Data included the DELA test (scores and scripts), written questionnaires and interviews. Participants did the same version of the reading and writing sections of DELA twice, once at the beginning of the semester (Time 1) and again towards the end of the semester (Time 2).¹ The writing test was double-marked, with any discrepancies resolved through discussion.

All participants completed a background questionnaire just prior to re-sitting DELA. This included questions about the participants' first language, language learning background, and the type of ESL support, if any, they had accessed. It also contained questions relating to variables that we thought might have a bearing on students' language development (e.g., language spoken at home, whether they have Australian friends). A copy of the questionnaire is appended (Appendix 1).

Semi-structured interviews were conducted with a subset of the group (n=15) representing a range of ELP levels (as indicated by the initial DELA scores), undergraduate and postgraduate students, and students who had and who had not accessed ESL support. Students were asked about their experiences of studying in an English medium university, and whether they believed their English language skills had improved, as well as about opportunities they had to communicate in English at the university and outside. The Interview schedule is appended (Appendix 2).

DATA ANALYSIS

Data analysis was both quantitative and qualitative. Comparisons of pre-and post-test (reading and writing) scores were used to investigate the impact of selected variables, including uptake of ESL support, on score gain. All writing scripts were analysed for discourse measures of fluency, accuracy and complexity to identify any changes in students' writing which may not have necessarily been reflected in the post-test score.

Fluency was measured in terms of the number of words produced (in the given time). In order to analyse for accuracy and complexity, all scripts were coded for T-units and clauses. A T-unit is defined by Hunt (1966, 735) as "one main clause plus whatever subordinate clauses happen to be attached to or embedded within it". This measure is the most commonly used unit of analysis of both written and oral discourse (Foster, Tonkyn and Wigglesworth 2000). Written scripts were also coded for clauses, distinguishing between independent and dependent clauses. An independent clause is one that can be used on its own (Richards, Platt and Platt 1992). In the present study a dependent clause was one which contained a finite or a non-finite verb, and at least one additional clause element of the following: subject, object, complement or adverbial (Foster, Tonkyn and Wigglesworth, 2000).

The measures of accuracy used in this study were the ratio of error-free T-units of all T-units (EFT/T), and of error-free clauses of all clauses (EFC/C). Errors in this study included syntactic errors (e.g., errors in word order, missing elements) and morphology (e.g., verb tense, subject-verb agreement, use of articles). Errors in lexis (word choice)

were included only when the word used obscured meaning. All errors in spelling and punctuation were ignored.

Two measures of complexity were used in this study. The first was the ratio of clauses to T-units (C/T). The other measure of complexity used was the proportion of dependent clauses to clauses (DC/C), which examines the degree of embedding in a text (Wolfe-Quintero, Inagaki and Kim 1998). According to Ellis and Barkhuizen (2005), these measures of accuracy and complexity can be applied to oral and written language data. All discourse measures used are presented in Figure 1.

<i>Fluency</i>	<i>Accuracy</i>	<i>Complexity</i>
No. of words per text (W)	Error-free T-units per T-units (EFT/T)	Clauses per T-unit (C/T)
	Error-free clauses per clauses (EFC/C)	Dependent clauses per clause (DC/C)

Figure 1 Discourse measures used in analysis of written scripts

In order to check for inter- and intra-rater reliability in coding, and following the advice of Polio (1997), guidelines were formulated stating clearly what constitutes a T-unit, a clause and an error. A random sample of four writing scripts (forming approximately 30% of the entire data set) were then coded by the second researcher and re-coded by the first researcher two days after the initial coding. Intra-rater reliability for T-unit and clause identification was 0.94 and 0.88 respectively. Inter-rater reliability for error counts was 0.82. Discussion between the raters resolved all disagreements.

Responses to survey questions that were categorical (e.g., L1, Have/Have not Australian friends) were entered into a data base. Responses to open-ended questions and responses to interview questions were coded thematically, around the factors found in previous research (Elder and O’Loughlin 2003, Green and Weir 2003) to influence ELP, including ESL status (whether the student had accessed any type of ESL support) and enrolment status (undergraduate or postgraduate).

Following Green and Weir (2003), who found evidence for self-confidence in writing ability and integration into the host culture to be important factors in explaining language proficiency gains, we also considered whether participants used English at home in Australia, and whether they had any Australian friends. In this study, self-confidence was operationalised as whether students indicated they had difficulties with their English on their questionnaire.

The effect of each factor on score gain was examined separately using statistical tests of difference.²

RESULTS

TEST DATA

In order to assess whether studying in an English-medium university makes a difference to students' English language proficiency, DELA scores on reading and writing (global and criteria scores) for Time 1 (T1) were compared with the scores for Time 2 (T2). The results are summarised in Table 1. The Wilcoxon matched-pairs signed-ranks test (SPSS Version 13) showed that the difference between T1 and T2 was statistically significant for all band scores. As the SEM for the Reading test was 0.3 (which was very similar to the SEM of tests used in Elder and O'Loughlin's study), it was not considered necessary to calculate the reliability of the score gains (Zumbo 1999).³

	<i>Mean T1</i>	<i>SD</i>	<i>Mean T2</i>	<i>SD</i>	<i>Z</i>	<i>p</i>	<i>Change</i>
Writing							
Fluency	5.6	.68	6.3	.79	-3.1	.000	0.7
Content	5.8	.66	6.4	.75	-3.7	.000	0.6
Form	5.7	.65	6.2	.72	-3.5	.000	0.5
<i>Global</i>	5.7	.66	6.3	.75	-3.5	.000	0.6
Reading							
Band	6.5	.91	7.3	.96	-4.2	.000	0.8

Table 1 A comparison of DELA scores at T1 and T2

In contrast, comparisons based on the discourse measures of writing fluency, accuracy and complexity, using a paired sample t-test, showed no statistically significant differences. This discrepancy in results for the band scores compared to the discourse measures is consistent with other studies (e.g., Douglas 1994, Iwashita and McNamara 2003) which have reported that discourse measures do not correlate well with proficiency band scores, i.e., the kind of scores used in DELA. This is because proficiency scores may collapse a number of different and potentially conflicting features into the one criterion. For example, the criterion 'form' combines complexity and accuracy. Yet greater complexity may sometimes cause lower accuracy. On the other hand, discourse measures such as accuracy

(e.g., Error free clauses) do not distinguish between type and severity of errors (Bardovi-Harlig and Bofman 1989).

In a review of a number of studies Green (2004: 11) concluded that “improvements seen in mean scores do not apply equally at all band levels”. Green’s review shows that candidates with an initial writing score of 5 or below tended to improve their scores on the second test. However, those obtaining an initial score of 7 tended to receive a lower band score on the second test. Candidates with initial band scores of 6 tended to remain at the same level. Green (2004) concluded that Band 6 could therefore be considered a plateau level, and hence it may be harder to progress beyond this level.

However, for the current study this effect was only evident for the writing scores (Tables 2 and 3). A greater proportion of participants (69%) at an initial band score of 5 on writing showed improvement when compared to those at an initial score of 6 (48%). However, for reading, a greater percentage of students whose initial band score was 6 showed improvement than students at a lower initial score (score 5), or at an initial higher reading score (7 and 8). These findings suggest that reading scores may plateau beyond an initial score of 6. Thus in terms of trends, Tables 2 and 3 suggest that, as in Elder and O’Loughlin (2003), the higher the mean DELA score at time 1 (T1), the smaller the increase at time 2 (T2). However, it should be noted that not all students showed improvement at Time 2.

Separate analyses were conducted for each of the factors linked to improved scores, using the Wilcoxon matched-pairs signed-ranks test for comparisons of reading and writing band scores, and independent t-tests for comparing scores on the discourse writing measures (fluency, complexity and accuracy). On this basis only three factors were found to be significant: ‘study status’ (postgraduate status) and discourse measures of writing complexity; ‘integration’ (Australian friends) and discourse measures of written accuracy; and ‘confidence’ and overall writing band scores.

<i>Global Level on Test 1</i>	<i>N</i>	<i>Higher score on Test 2</i>	<i>Same score on Test 2</i>	<i>Lower score on Test 2</i>	<i>Mean gain on Test 2</i>
5	13	9 (69%)	4	0	0.92
6	25	12 (48%)	11	2	0.44
7	0				
8	1			1	-

Table 2 Frequency of overall score gains across Band Levels on Writing

<i>Global Level on Test 1</i>	<i>N</i>	<i>Higher score on Test 2</i>	<i>Same score on Test 2</i>	<i>Lower score on Test 2</i>	<i>Mean gain on Test 2</i>
5	7	4 (57%)	3	0	1.28
6	9	8 (89%)	1	0	1.11
7	19	10 (53%)	7	2	0.42
8	4	2 (50%)	2	0	0.5

Table 3 Frequency of overall score gains across Band Levels on Reading

QUESTIONNAIRE AND INTERVIEW DATA

Our quantitative results for the entire cohort show that, on average, the participants' reading and writing skills, as measured by DELA scores, improved over the course of a semester in an English-medium university. The majority of students (11) interviewed confirmed that they had noticed an overall improvement in their reading ability, which they attributed to the large volume of reading they were required to do. However, it is important to recognise that there may have been a practice effect in our study, as the same version of DELA was used on each occasion. Indeed, a number of students (6) admitted that they found it easier to do DELA the second time around. However, a number of students (7) were less certain about improvement in their writing, and three students felt that their writing deteriorated over the semester.

The area where there was the smallest gain in writing band scores was for Form (Vocabulary and Grammar) (see Table 1). This could be because grammatical accuracy may take longer to develop, but may also be due to the limited opportunities for students to practise their writing. Furthermore, research in immersion contexts has shown (e.g. Swain 1991) that development of linguistic accuracy and complexity depends on feedback and a requirement to produce accurate language; mere exposure to the target language is insufficient. During interviews, for example, some (4) reported that their assessment included a group assignment where they were not directly involved in the writing process:

R: How much writing do you do in your course?

W: Not much [...] only report [...] we did a project and we need to submit a report 4000 words [...] but it's group job so, you know, everyone only just 1000 words [...] two subjects like that [...] I haven't written a lot since I come here (Wang /M. Telecommunication)⁴

One informant had assignments which comprised calculations rather than written discourse:

R: How much writing do you do in your course?

T: We have assignment in one subject [...] we have to explain but it's really really simple regarding the words just prepare a graph and some table (Thuy /M.Applied Commerce)

Another postgraduate law student noted that because her assessment consisted largely of take-home exams, she had no opportunity to receive feedback on her writing, and that therefore her writing deteriorated over the semester:

When I was in Indonesia I had formal course and I finally reached 7 for my writing but after I got here [...] I didn't practice much [...] (Diane /M. Law).

Diane also noted that the only feedback on writing she received was in a subject which required students to produce a research paper. Furthermore, the feedback was given on an early draft of the research outline, and not on the language of the report itself.

Lack of feedback on writing was identified by a number of students as important for the development of writing skills. Sam, a student in the Master of Business and IT, felt that his writing had not improved over the semester, and when asked what would help his writing, responded:

If someone [...] if I get my writing proofread before I hand in the writing it will be better [...] If I get detailed feedback about how I write and how I can improve is much better

Although limited editing services in the form of individual tutorials are provided by the various language and learning support units at the university, students do not always take advantage of such services. One reason is that the service requires students to complete their assignment well in advance of the due date, and a number of students (4) admitted that they complete their assignments just prior to the due date. Instead, students turn to their more proficient colleagues, host family, or simply to copying from sources: "we always take the reference [...] we just take copy or paraphrase sentences". (Lizan /M. Project Management)

Of those interviewed, the ones that had accessed ESL for credit courses reported that they found the courses valuable:

I think in the last semester my English writing has improved because I attended the English course [...] Presenting Academic Discourse [...] I think she taught us academic [...] formal writing [...] so I learnt much [...] my writing improved (Hongxing /M. IT)

Another respondent highlighted the benefits of the feedback provided in her undergraduate ESL subject:

It is really good because teacher helped my English a lot [...] she let us writing reports and she check every time and it really helps me (Haruna /B. Urban Planning)

A significant difference found in favour of the postgraduate group for the discourse measures of complexity could be explained by the higher volume of reading and writing requirements at the postgraduate level:

My reading improved because I have to read a lot of books to prepare for my examination [...] read a lot [...] maybe more than 10 books [...] totally [...] read everyday about one or two hours (Lizan/M. Project Management)

An alternative explanation offered by Elder and O'Loughlin (2003) is that the higher academic qualifications of the postgraduate students could be surrogate measures of language aptitude and literacy levels.

Measures of integration with the host culture, i.e., having native speaker friends, had a significant impact on the written discourse measures of accuracy. This is consistent with Green and Weir (2003), although their study referred to global measures of writing rather than accuracy alone. This is clearly an area which requires further investigation. In the interview data the majority (11) of the respondents reported that they had limited opportunity to speak English both outside the university and in their classes, because many of their classmates were from the same L1 background:

My English environment is not good enough[...] I think, as you know, most of my classmates are Chinese so its pretty hard to speak English among us[...] so I think I speak English not so much (Hong /M. IT)

Actually because I study in Engineering faculty especially postgraduate level[...]there are too many, too many Chinese[...] so I haven't chance speak English [...] I discuss problems with my classmates because they're nearly all Chinese [...] it's easier to speak Chinese (Jennifer /M. Engineering)

The lack of opportunities to speak English is compounded by group assignments:

We have group assignment [...] I will work with two other Vietnamese [...] because we study the same subject [...] we are in the same tutorial group so we often discuss with each other [...] we decided to form the group [...] actually we know we should form the group with other local students, but [...] it's easier (Thuy /M. Applied Commerce)

Participants who indicated on their questionnaire that they were not having any difficulties with their English scored significantly higher on all band scores than the others. To the extent that this can be interpreted as a measure of self-confidence (i.e., rather than self-assessment), this confirms Green and Weir's (2003) as well as Elder and O'Loughlin's (2003) findings that self-confidence in writing has an impact on gains in writing.

CONCLUSION

What this study has shown is that, for the majority of these students, studying in an English medium university and being immersed in the L2 did lead to language improvement, even after just one semester. The gains were comparable to the average score gain reported by Elder and O'Loughlin (2003). However, whereas in that study participants were retested following 10–12 weeks of intensive English language instruction prior to entering university, in the current study participants had completed a semester of regular English-medium university study.

A number of factors appear to have a bearing on improvement. Traditionally, research has considered the kind of language support and factors related to the immediate living environment (e.g., accommodation, friends, language used at home), as was the case in this study. However, what the interview data have shown is that researchers need to look at factors in the broader educational context to explain students' progress, or lack thereof. Such factors include, for example, the language background of fellow students in the class, and more importantly, the nature of the assessment work students are required

to complete. Learners need an input-rich environment, and opportunities to produce output in order to improve their language skills. This means multilingual classes where learners need to interact in the target language, and assignments that provide them with an opportunity to practise their writing. Ferris (2003) argues that for language learners, feedback on writing may be the single most important element that affects their successful development as writers. Take-home exams and group assignments may be more efficiently implemented, but rarely provide learners with feedback on their writing, and thus deprive the learners of language learning opportunities.

Elder and O'Loughlin (2003: 237) point out that "a score gain in itself is not always evidence of a real gain in language proficiency". We would like to add that a lack of score gains does not necessarily mean that there had been no improvement in language skills. This is because improvements may not have been large enough to be captured by the DELA scores or by the discourse measures, or that improvements may have occurred in areas which were not tested (e.g., presentation skills).

The results of our study need to be interpreted cautiously. One problem with studies which compare pre- and post-test scores is that they are based on the assumption that all participants will be equally motivated to complete the test to the best of their ability on both occasions. Test takers tend to perform better on a test when the results have high stakes (e.g., lead to important decisions) compared to low stakes (e.g., practice tests). Elder and O'Loughlin (2003: 214) also suggest that the provision of financial incentives (in this case for sitting the post-test and attending an interview) may result in a lower level of commitment than under normal conditions. Furthermore this was a relatively small scale study, and hence generalizations cannot be easily made. A larger scale study with lengthier interviews and learner journals may elicit a more comprehensive picture of the language learning experience of international students at our universities.

APPENDIX 1: SURVEY

NAME _____

1. What languages can you speak?

2. What is your *first* language (i.e., that you learned to speak first)?

3. When did you first arrive in Australia? _____ mm / yy

4. Have you lived in another English speaking country? Yes ☐ No ☐

If yes,

When _____

For how long? _____

5. Please complete this table to show your recent education.

Year	Country of residence	Name of course <i>e.g., VCE, IB, SAM Foundation Studies</i>	Language of Instruction
2003			
2002			
2001			
2000			

6. Have you done IELTS? Yes ☐ No ☐

If yes, what was your score? _____

7. Where are you living at the moment? (tick one)

Host family ☐

Hostel ☐

Relative ☐

Other (please explain) _____

8. What language do you usually speak at home *in Australia*? _____

9. Do you have any Australian friends? Yes ☐ No ☐

10. Are you experiencing any difficulties with your English? Yes ☐ No ☐

If yes, what sort of difficulties?

Speaking ☐

Listening ☐

Reading ☐

Writing ☐

Other (please explain) _____

11. Did you receive any ESL support in Semester 1? Yes ☐ No ☐

If yes, what type and how useful was it?

Type of ESL support		<i>(circle one)</i>		
		very useful	quite useful	not very useful
AESL 1	<input type="checkbox"/>	•	•	•
AESL 2	<input type="checkbox"/>	•	•	•
IBE	<input type="checkbox"/>	•	•	•
Individual tutorials	<input type="checkbox"/>	•	•	•
ESL workshops	<input type="checkbox"/>	•	•	•
(type) _____				
Help from friends	<input type="checkbox"/>	•	•	•

12. Do you feel your English has improved in Semester 1? Yes ☐ No ☐

If yes, in what way? _____

APPENDIX 2: INTERVIEW SCHEDULE

The interview questions are based on issues arising from the initial questionnaire and test performance.

Questions may include some or all of the following:

1. Did you study English before you came here? How well has this study prepared you for studying at MU?
2. What language do you usually speak at home (in Australia)? With your friends?
3. Do you have any Australian friends?
4. Are you experiencing any difficulties with your English? If yes, please explain
5. Have you tried to get help with your English? If yes, please explain
6. Do you feel your English has improved since you commenced your studies? If yes, in what way?

ENDNOTES

- ¹ As the study depended on paid volunteers and the full version of DELA takes approximately three hours to complete it was not feasible to administer the full version of the test on both occasions.
- ² Due to the small number of participants who had completed ESL credit subjects (7), and that some of them also accessed additional not for credit ESL support, for the purpose of this analysis no differentiation was made between different types of ESL support, whether it be credit bearing courses or not for credit workshops and individual tutorials.
- ³ The standard error of measurement (SEM) is related to test reliability. For example, SEM of 0.3 indicates 68% confidence that a student's 'true score' is ± 0.3 of the 'observed' band score.
- ⁴ Names used are pseudonyms. M and B denote a Master and Bachelor degree respectively.

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