Comparative Achievement of HEFA and FPOS Undergraduate Students: An Australian Case Study

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Recent years have seen a growth of international student numbers, representing 20.3 percent of the total Australian university student population in 2003. This paper reports on an Australian case study that explored the comparative achievement of Fee Paying Overseas Students (FPOS) and Higher Education Funding Allocation Students (HEFA) in a range of undergraduate programs. In designing the study, the research team made the distinction between FPOS students and HEFA students, recognising, though excluding from consideration, the diverse language and cultural backgrounds of HEFA students. In the first stage of the work, assessment data for the two groups of students across a broad range of programs for 1999–2001 were investigated. Emerging from this work was what we took to be a provisional finding: that international students, taken collectively, appeared to be under-represented in the grades of High Distinction and Distinction and over-represented in the lower grades. Further analysis was undertaken to test the durability of this finding when international students were grouped by nationality. A markedly different picture of comparative achievement of HEFA and FPOS undergraduate students then emerged, the analysis pointing to a possible link between nationality and academic outcomes. The study provides a foundation for further investigating HEFA and FPOS students’ assessment experiences and outcomes in relation to efforts at internationalising the curriculum at Australian higher education institutions.

Introduction

The last decade in particular has seen exponential growth in the numbers of international students undertaking studies in Australian tertiary institutions, one consequence being the clear, even urgent need for internationalising the curriculum on offer at the various sites. Concurrent with the emphasis on internationalising of curriculum has been the strong interest in and promotion of quality improvement and accountability mechanisms, including those relating to client satisfaction for fee-paying overseas students. The study reported in this paper reflects the commitment to improving student learning outcomes and learning environments. Set against a range of efforts at internationalising curriculum, it seeks to examine the actual learning outcomes of Higher Education Funding Allocation Students (HEFA) and Fee Paying Overseas Students (FPOS) across a range of programs, as captured in assessment data, and investigates the comparative achievement of the two groups at an Australian university. The study followed from a small and less formal study that showed that, generally, HEFA students perform better than FPOS students. This initial result was not surprising, although there was no reason to accept it as inevitable.
This present study was undertaken to confirm the result of the first study, to try to understand its causes, and to devise some interventions so that both groups of students would have an equal chance of success.

What follows is written in two sections. The first section presents an overview of relevant literature to set the background for the study; the second section provides a discussion of the methodology and main findings.

**Background for the study**

Full fee paying overseas students (FPOS) form a part of an already strong and growing sustainable industry in Australia, with "education [being] Australia's fastest growing export service sector and ...worth more than $4 billion annually" (Department of Education, Science and Training, 2002). Several studies (Australian Bureau of Statistics, 2002; DEST, 2002; Vandermensbrugghe, 2003) have indicated that among the reasons that international students report choosing Australia for their courses are the following: the perception of high quality courses; the opportunity to study in English; the success of advertising campaigns run by universities; the favourable exchange rate and relatively low cost of living, particularly compared to the United Kingdom and USA; increased opportunity for migration if completing an Australian course of study; a chance to improve their career opportunities in their homeland through developing, for example, improved language skills; and cultural exchange with Australians.

Providing useful contextual information to the study reported in this paper are several studies that address causes of difficulties faced by overseas students, particularly Asian students. The language barrier is generally agreed in the literature to be the most obvious impediment to high achievement for most FPOS students. Australian researchers, Ballard and Clanchy (1991) claim that, ‘We probably have to accept that most foreign language students will never draw level with native speakers in their control of English’ (p. 31). The literacy demands of speaking and listening are recognised as significant for newly arrived students from language backgrounds other than English (LBOTE) as they deal with not only academia, but also enrolment and interactions with other students and the general public. Ballard and Clanchy (1991) note that accent, speed of speech and use of idioms are several factors adding to difficulties for foreign students. Similarly, a British study (Littlemore, 2001) found that lecturers’ use of metaphors often caused international students to misunderstand the main points of lectures.

The quantity and type of reading required at university level can also present language-related barriers to those international students who have limited experience in classroom contexts where English is the main or only language of instruction. In regard to this, a key point seems to be the relationship between the breadth and depth of language skills covered in assessments undertaken for entry purposes and those necessary for meeting the demands of the multi-modal learning contexts in which the students interact with lecturing staff and fellow students. This is not a new insight, with Ballard and Clanchy (1991) claiming more than a decade ago that ‘While most overseas students believe themselves to be—and indeed show up in language tests as being—competent readers in English, the skills they have developed (like the skills the tests are testing) are no longer adequate or appropriate for the new context of learning.’ (p. 31).
It has also been reported that many international students are surprised to find that the teacher/student relationship is very different from that in their homeland in that university teaching staff are not as personally or academically supportive, nor readily available for consultations. Interviewees in Hellsten’s (2002) study indicated that they expected to be ‘taken care of’ by institution and their larger host community. They felt that there was a lack of caring for students’ welfare.

The demands of academic writing in particular and academic literacies in general (Street, 1996) can also pose problems for some FPOS students. Often students have had very little experience in Western academic essay format, argument, laboratory reports or any kind of direct writing format, especially in examination conditions (Ballard & Clanchy, 1991, 1997). Several other writers including Spack (1998) and Fulwiler (1984) also point to the need for making explicit the demands of academic literacies when they highlight the limitations on student learning caused by the refusal of some faculty members in American universities to introduce teaching of academic writing as part of their courses because it would be an extra demand in faculty staffs’ increasingly overburdened workload. Juxtaposing this view is the stance taken by Land and Whitley (1986) who suggested that some of the factors causing difficulties for FPOS students come from academics themselves. Instead of suggesting that ESL students learn to master the rhetorical traditions, Land and Whitley (1986) claim that academics could learn to value the rhetoric of other cultures. Of special interest in regard to the latter are issues relating to plagiarism. Plagiarism is a relatively new concept in Western culture. Although it is something that all first year students have to learn to avoid, it can be a foreign notion to students from many non-western cultures (Ballard, 1995). To know a text and quote it by heart is seen by some cultures as very studious. Such a student would not presume to be able to word a thought better than a great scholar. Illustrating some of these points are the following comment by an International students after completing the 10 week PEP academic English course at the University of Adelaide, "I never thought plagiarism would be such a big issue until I attended the PEP course" (Pryzibilla & Cadman, 2001). Further, in relation to critical thinking, another student completing the PEP course said, "The most important academic factor is critical thinking. That is very different from my university. We do not use critical thinking in [country x]. We must follow lectures step by step and copy down notes and memorise it."

The extent to which the demands of making the transition into Australian academic cultures remain implicit is a further compounding factor for both local and international students. Hellsten (2002) reported that poor transition is seen by academics possibly to ‘lead to reduced academic learning opportunities and achievement levels.’ For FPOS students, transition to a new learning environment can be a quantum leap as they negotiate not only new discipline specific terminology, but often an entirely new cultural concept of education. A key point is that the instructional and language-related needs of international students cannot be assumed to be the same as those of local students, this being a critical observation in a recent Australian study at Curtin University (Soontiens, 2002). It was found that native English speaking and Australian students benefited more from a professional development skills course than their fellow students with English as a second language, as demonstrated by their assessment results and by pre and post course student surveys.
The Curtin University study is one of the few published investigations to report comparisons of results achieved by different nationality groupings of tertiary students at Australian or overseas universities, the focus being on assessment of student outcomes on a professional skills development program. Given the extensive opportunities for research on international student issues, Sanderson (2001) maintains that ‘there has been a dearth of research done in such areas despite the favourable conditions for these undertakings.’ This stands in contrast to the ample literature on the topic of difficulties faced by international tertiary students, as discussed above.

Also worth noting is the potential impact on outcomes, for both HEFA and FPOS students, of a range of factors including those relating to social support and employment, with many of these being outside the control of universities. As identified by Ballard (1995), some of these factors are: accommodation, finance, contact with local students, distance from parental guidance and family support systems, and stress caused by isolation and language difficulties which can lead to other social problems such as drinking and depression. For our purposes, these factors are shown in Figure 1 below.

**Factors Beyond University’s control**
- Country of origin
- Financial support
- Local relative/friend support
- Reading/writing/listening skills for “Australian” English
- Experience with Western academic tradition
- Prior knowledge
- Previous academic achievement
- Motivation
- Match between homeland & Australian learning styles
- Choice of program
- Transition into Australian Community
- Visa conditions

**Factors Within University’s control**
- English proficiency requirements
- Equitable teaching & assessment practices
- Learning support services
- Counselling services
- Mentor
- Transition into Institution
- Integration with local students
- Expectations about the university

**Figure 1.**
Factors affecting achievement of overseas students.
While some work has been done to highlight the mix of academic and social factors that shape student learning, little sustained systematic research has been undertaken into the achievement of fee-paying overseas students in Australian students, taking account of the interface of students’ cultural and linguistic backgrounds and efforts at internationalising curriculum. Similarly, little is currently known about the performance of FPOS students relative to local students, though a prevailing assumption is that the latter group have the advantage of extensive prior educational experiences in which English is the main language of instruction. Supporting the findings of the study presented in the remainder of this study is an English study that found that bilingual students who are reasonably proficient in English perform better on average than English only speaking students at KS1, KS2 and GCSE levels, and that ‘ethnic minority achievements are differentiated by both gender and level of fluency in English’ (Demie, 2001, p. 91). Demie’s study shows that a level of bilingualism is an important indicator of student performance, but not the sole indicator, as gender is included as a factor. To date, this present study has not accounted for gender differences.

A seminar conducted by the Dr de Wit, Senior Adviser International from the University of Amsterdam, pointed to some avenues for further investigation. de Wit (2002) described how the further development of English as the language of communication in Higher Education forces other countries to teach in English. As an example, the University of Amsterdam teaches 20-25% of its courses in English. Other countries that teach some university courses in English include Germany, Sweden and France. Many courses in European Universities use Western textbooks. A recent survey (Friedhelm Maiworm, Bernd Wächter, 2002) conducted by Brussels-based Academic Cooperation Association (ACA), found that 30% of 1,500 Colleges and other Higher Education Institutions in 19 European countries where English is not the national language, offer a selection of programs in English. Although most subject areas are covered, nearly half are in the fields of business administration and engineering. Finland and the Netherlands are the biggest per-capita providers of programs offered in English, while Southern European countries offer virtually no such programs. The main purpose cited for the provision of such programs is to enable graduates to compete in the global economy (Friedhelm Maiworm, Bernd Wächter, 2002). From a language and cultural perspective, the transition from European University to an Australian University might not be such a vigorous challenge as is faced by FPOS students with more limited opportunities to participate in classrooms where English is the language of instruction.

When reviewing the pre-university education systems across the country categories chosen for the present study, Sweden has the system most similar to school-based curriculum and assessment approaches currently used in various Australian states. This is evidenced in similarities including continuous assessment; localised curriculum; and inter-school and inter-program grading standards and weighting, which lead to a final grade point average used in the university selection process (Arnove, 1992). It is possible that the similarity in education systems between Sweden and some Australian states may lead to a smoother transition for those students into some Australian universities. Further sustained investigation will be required to shed light on the performance profile of European and English speaking FPOS students compared to local students and on the
factors leading to the differences in performance among the various cultural groups and with HEFA students.

It is not within the scope of this paper to address specific strategies for improving FPOS and HEFA student outcomes. It is noted however that many Australian universities offer learning support facilities to both FPOS and HEFA to provide direct assistance to students through their course work. Similarly, many offer professional development and support for staff in implementing strategies for improving international students' successful transition into Australian universities. As Ballard and Clanchy (1991, 1997) point out, these strategies do not require massive changes to existing course work and will improve the teaching and learning opportunities for all students, particularly considering Australia’s multicultural population and increasing international student population.

Study design
The one-year study reported here was undertaken in 2002, its main aim being to compare the achievement of HEFA and FPOS students. The motivation for the study has already been referred to above, and its design was in two stages as follows.

Stage 1
1.1 Collate and analyse university data on grades achieved by HEFA students compared to grades achieved by FPOS students.

Stage 2
2.1 Undertake a literature review on factors affecting achievement of international students;
2.2 Undertake document analyses: types of courses and assessment, match between IELTS and course assessment, course/assessment demands; assessment information relating to provision for international students;
2.3 Interview appropriate teaching staff associated with targeted programs to identify factors affecting outcomes, including those relating to the conditions under which assessment items are completed. (Due to time and funding constraints, this phase has not been carried out)

For initial Stage 1 analysis, assessment results for FPOS undergraduate students, taken collectively, were compared with the results of HEFA students across a range of 1999 to 2001 programs. Only those programs with an enrolment of more than 18 FPOS students in a semester were included in the data set for analysis. In response to the main finding relating to the achievement profiles of the two groups involved in Stage 1, discussed below, Stage 2 was designed to investigate further comparative achievement by breaking the FPOS student group into broad categories or sub-sets as follows:

- English as a first language: international students from countries where English is the national language
- European: students from Europe for whom English is not their first language
- Pacific and Equatorial regions
- Asia and India
At the outset two points need to be made about these categories formed from the 108 countries represented by the international students represented in this case study. First, they reflect the research team’s understanding that FPOS students do not represent a homogenous group, and therefore there was a need to develop a provisional framework for interrogating available assessment data. The intention was to review the suitability and sufficiency of the categories with a view to developing a more fine-grained or sharper set useful for a longitudinal study of student outcomes. Second, the categories were based on some or all of the following considerations: regional similarities (and differences) in language, geographic location, culture/s, language of education, and sample size. (Small numbers of some student nationalities required their inclusion with other nationalities.

When breaking FPOS students into ‘like nationalities’, only those programs with more than 50 FPOS students enrolled in a semester, were included in the Program by Semester table. The criteria of requiring over 50 FPOS students for investigation of Grade Point Average (GPA) was met in 8 programs. Of these, not all 1999 to 2001 semesters fulfilled the criteria. A total of 38 semesters over the 8 programs fitted the criteria for Grade Point Average by ‘like nationality’ investigation. These programs were:

- Bachelor of Business
- Bachelor of Commerce
- Bachelor of Information Technology
- Bachelor of International Business 1105
- Bachelor of International Business 1107
- Bachelor of Design Studies
- Bachelor of Hotel Management
- Bachelor of Arts in Communication.

This study did not include provision for FPOS students through offshore campuses, online delivery of courses, and delivery of English as a Second Language courses. The main results are presented below.

**Results**

The initial investigation (Stage 1) of comparative achievement drew on an assessment data set for the period 1999-2001 that included all programs where FPOS students represented 18 or more of the enrolment of a Bachelors level program with an enrolment of at least 60 students. In keeping with the study's aim, the results of local students (HEFA) were compared to those of international students (FPOS), revealing that the former, as a group, were achieving better results overall in the chosen programs. On a grading scale of 1 to 7 (1 being the lowest; 7 the highest), results suggested that a glass ceiling cut in at the 6 level or, in some cases, at the 5 level for FPOS students. Specifically, the data showed that:

- FPOS students were generally over-represented in the 3-4.99 GPA score range, with lower representation in the 5-7 GPA score range.
HEFA results displayed a more even distribution across the whole GPA range, typical of a bell-curve distribution.

**Figure 2.**
1999 GPA comparison of HEFA and FPOS students.

**Figure 3.**
2000 GPA comparison of HEFA and FPOS students.
The initial study supported the unsurprising result that HEFA students were performing generally better than FPOS students. However, on closer inspection of the raw data a more complicated picture emerged. The approach taken was to break the FPOS data into like nationality sub-categories to see if the results held for the wide variety of international students. This second analysis showed that the mean GPA for each broad student category as represented in descending order is:

- FPOS European mean GPA 4.66 (mean standard deviation 1.21)
- FPOS English as a first language mean GPA 4.52 (StdDev 1.48)
- HEFA mean GPA 4.21 (StdDev 1.63)
- FPOS Pacific and Equatorial mean GPA 4.06 (StdDev 1.26)
- FPOS Asia and India mean GPA 3.92. (StdDev 1.33)

It is also worth noting that, over the 38 programs/semesters included in the data set, FPOS Europeans achieved the highest mean GPA on 20 occasions; FPOS English as a first language students achieved this on 15 occasions; while FPOS Pacific and Equatorial Students achieved the highest mean GPA on 3 times occasions. The corollary of this information relating to the lowest mean GPA of the 38 program/semesters, was also investigated. Readers interested in this and other more detailed findings are advised to contact the researchers.
Figure 5.
1999-2001 Mean GPA comparisons of HEFA and FPOS students

The research team was surprised to discover that the highest performing group was not HEFA students. Indeed, this group of students, as shown above, was third on the list, being outperformed firstly by FPOS European students and secondly, FPOS students for whom English is a first language. These findings held across the whole range of programs examined, even those with an explicit international focus in their curriculum. Essentially, the findings challenge Australian universities to clarify what they take to count as internationalisation in action, providing an opening for addressing critical issues around the meaning of ‘international’ in curriculum and assessment matters. Specifically, the study discredits the assumption that HEFA automatically outperform FPOS students, bringing to the fore questions about the significance of English language ability as the most important predictor of academic study. It also shows clearly the inadequacy of treating FPOS students as a single and unified group. Further, it points to the necessity of tailoring student support programs that take real account of student diversity.

Conclusion
Overall, this study has presented a profiling of comparative achievement, showing cause for further investigation into the complex factors that shape the grading outcomes of FFPOS students in particular. The study lays a foundation for a further systematic, longitudinal study of student outcomes within universities, and provides an opening for
critical investigation of the nature of course and program assessment demands. Beyond this, the study calls for a rethinking of how assessment data can be used productively in a principled investigation of the impact of internationalisation initiatives as they relate to the enacted curriculum in university classrooms. As part of this move to value even more highly assessment information for what it reveals about the quality of student learning, there is clear need for bringing together a range of data types into a multidisciplinary and multiperspectival study. Of special interest would be the analysis of program content in relation to the internationalisation of the university curriculum, as well as the implications of this for how assessment demands are designed and implemented. Also valuable would be interviews with students and staff on the topic of learning, teaching and assessment demands facing FPOS students, and how these can be analysed in conjunction with statistical data including financial support for students, university entry grades, IELTS scores, reports from student learning services, and reported grades. It is critical that FPOS students from the range of cultural and linguistic backgrounds be included in such a study, bringing to the surface their own insights into making the transitions into the university classrooms in Australia. At issue here would be not only the cognitive and linguistic demands of university study, but also the demands of accessing and participating in interactional patterns taken to be routine in those classrooms. Only when internationalisation of curriculum initiatives come into direct contact with data on assessment outcomes can the real measure of impact be recognised and celebrated.

References


