

The Lucky Country? Experiences of International Postgraduate Engineering Students

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***Abstract:** Results are reported of a survey of international engineering students in three consecutive years. Questions related to the workload and perceived difficulty of their study, their preferred assessment methods and part-time work commitments. In addition, students were asked what problems they had experienced and how these were resolved.*

The survey result showed some unexpected and sometimes contradictory findings. Problems perceived by lecturers, such as the inadequate writing skills of many international students, are not perceived as problems by the students. Most students experience problems adjusting to the Australian educational and assessment system but the assessment methods used in Australia are considered preferable to the assessment methods used in their home countries. Students who spend more time in paid employment consider their study easier than other students but do not obtain higher marks. Students appreciate measures taken by the University to help them adjust but assistance from other students is more important.

Introduction

Australia has become a major provider of international education. This has not always been without its problems, however. There has been debate over the issue of academic standards and internationalisation of higher education in Australia (Devos, 2003). Academics have been critical of the writing skills of international students (Robertson et al. 2000) and the English language requirements for international students Coley (1999). Language difficulties and cultural differences have been mentioned as factors contributing to plagiarism for international students (Park 2003). International students have been alleged to be surface learners, lacking independence and critical thinking, however, some research challenges these stereotypes (Ninnes et al., 1999). Some studies claim that the problems experienced by international students are essentially the same problems as those experienced by Australian students: financial problems, and study related problems such as workload and fear of failure (Mullins et al., 1995) while other studies indicate that international students are financially secure but need to adjust to the Australian educational methods and suffer from loneliness (Leder & Forgasz, 2004). Studies in other English speaking countries cite discrimination, different learning styles, practical issues such as finding accommodation and health insurance and alienation and homesickness as problems of international students (Poyrazli et al., 2007, Ladd & Ruby, 1999, Surdam & Collins, 1984) Several Australian universities have introduced bridging programs to help international students overcome adjustment problems (Cargill, 1996, Felix & Lawson, 1994).

Experiences at CDU

CDU started offering Master by coursework degrees in Engineering relatively recently (Master of Engineering Management in 2004 and Master of Engineering in 2005). The first international students enrolled in these degrees in 2005. In 2008 international students accounted for 36% of the EFTSL in Engineering.

In 2006 it became apparent that a number of students had difficulties with the requirements of their study. Assignments were either not handed in at all or submitted too late. Students were absent from classes, even though attendance was mandatory for international students. Often students arrived after the start of a lecture and left tutorials early. In general, students seemed to spend insufficient time on their studies.

The Master of Engineering degree includes a one semester 20 credit point thesis component. This requires students to make a project plan, manage their time, do some independent work and produce a written report. Students had difficulties with all these aspects. Several students delayed starting their thesis work until half way through the semester. Others did not understand that it was not sufficient to report the work of others. A number of students were not capable of writing grammatically correct English.

Most postgraduate students had part time jobs and staff felt that students were working too many hours to the detriment of their study. International students are allowed to work 20 hours per week during the semester and there were rumours that some students were working even longer hours.

Plagiarism also became a major problem in 2006. Thirty-one cases of plagiarism were detected by staff. Subsequent discussions with students revealed that they were not sufficiently aware of the serious consequences of plagiarism and that many did not understand that copying material from the internet without reference constitutes plagiarism.

To help students adjust to studying in Australia a number of measures were taken by staff. At university level introduction days for all international students were instigated. The School of Engineering organised its own introduction session, discussing the requirements of the study, the consequences of plagiarism and the risks of working too many hours. A postgraduate representative outlined the differences between the educational system in Australia and the Indian subcontinent during this introduction session. The library, in cooperation with the thesis coordinator, organised workshops for postgraduate students about correct referencing and ways to avoid plagiarism. Free English language tutorials were already available but they were now actively promoted by staff and special sessions were organised for postgraduate Engineering students. The purpose of this research is to evaluate the effectiveness of these interventions from the students' point of view.

Survey and focus group

To investigate the experiences of international postgraduate engineering students, a cohort of postgraduate students was asked to fill in a questionnaire. Questions related to the workload and perceived difficulty of their study, their preferred assessment methods and part-time work commitments. Students were also asked whether they attended all classes and if not what their reasons were for not attending. In response to the problems with plagiarism, mentioned above, questions related to plagiarism and the effectiveness of the library session were added to the survey. In addition, students were asked what problems they had experienced, what they had done to overcome these problems and in what way the School of Engineering and the University could assist them. In the 2007 and 2008 survey, students were also asked whether they had attended the workshops provided by the university and the School of Engineering and whether these workshops had been useful.

Results

The survey in 2006 consisted of 29 postgraduate students in 2006, 22 students in 2007 and 18 students in 2008. Most students were studying full-time. All postgraduate students were enrolled in a Master by coursework degree in Engineering or IT. There exists, however, a large variation in the average number of hours full-time students report to study per week, ranging from 12 to 90 hours (average 32.6 hours). Most (89%) students report having a part-time job, working on average 16.1 hours per

week. This did not change significantly during the three years, indicating that attempts by staff to discourage students from working long hours during the semester had been unsuccessful. No students report working more than the legal maximum of 20 hours. Despite the fact that all students have an undergraduate degree in Engineering, and despite the skills shortage in Darwin, only 10% of students do engineering work. The majority is employed in unskilled or semi-skilled jobs like filling shelves or working at the checkout in the supermarket, waitressing or cooking. Most students do not enjoy their work and do not consider it useful work experience. When asked for the reason why they work 88% of all students say that they need the money to support themselves. This is supported by the fact that these students spend the money they earn on rent and food. In the focus groups, some students said that their parents had already paid the tuition fees and felt that they could not ask them for more money. Others mentioned exchange rates as the reason for the necessity to earn money. Some said that they were obliged to pay their sponsor, or that they wanted to send money “back home” to financially support their family.

It is not clear to what extent work prevents students from attending classes. Of the students who did not attend all classes, the majority claims that poor health was the reason for their absence. Very few (2) students say that they missed classes because of work commitments. However, 44% of the students who did not attend classes claimed that they were “too busy”. There is no strong correlation between the number of hours students spend studying and the number of hours they spend in paid work ($r=0.04$ for all students). Most students (77%) consider the workload high and 49% of all students think the study is difficult. Predictably, students who spend more hours studying consider the workload higher (correlation coefficient of 0.19); however, these students also consider their study less difficult (-0.19), possibly because they feel better prepared for exams.

A consistent but puzzling result is the negative correlation between the number of hours that students spend in paid employment and the perceived difficulty of the study (-0.39). Focus groups held in 2006 and 2007 suggested that these students might only be aiming for a pass mark; something they thought was easy to achieve. However, this is not supported by the survey results of 2008. Students who work the legal maximum of 20 hours generally aimed for high distinctions and the one student who aimed for a pass only worked 10 hours, considerably less than the average of 16.1 hours. The students who aimed for high distinctions did not achieve their goal; none of the international student obtained a high distinction in 2008 and very few obtained distinctions. This may indicate that students underestimate the level of difficulty of the study.

When asked what problems they experienced when they started studying in Australia 50% of the students say they had financial problems. A number of students mention the high cost of living and the difficulty of finding affordable accommodation. 37% found it difficult to adjust to the Australian culture and 44% of the students had been homesick. However, the main problem international students experience when they start studying in Australia is adjusting to the educational system. 89% mention that they found it difficult to adjust to the educational system, in particular the assessment methods. Differences mentioned between the assessment at Charles Darwin University and assessment in their home country included the importance of continuous assessment, the larger emphasis on communication skills and higher standards at Charles Darwin University. 81% of all students believe that CDU is very tough on plagiarism.

Although students have major difficulties adjusting to the assessment methods, they do not prefer the methods used in their home country. 75% say they prefer the assessment methods used by CDU and the main reason why they prefer these assessment methods is that they believe it prepares them better for the workforce. Nearly all students think that subjects should be assessed with a combination of exams, assignments and possibly tutorials and laboratory reports. It is remarkable that while the Australian assessment methods cause the most adjustment problems for international students, they become the preferred assessment methods within a just a few months after arrival in Australia.

The library workshop about plagiarism and referencing was attended by 75% of the students. 82% of the students found the workshop very useful and the remainder found the workshop somewhat useful. 92% of students say they understand what plagiarism is and that the implications of plagiarism are severe. As a result of the workshop, 80% of the students feel confident that they can avoid plagiarism

but only 39% is confident that they can paraphrase correctly. The effectiveness of the library workshop is further evidenced by the fact that very few cases of plagiarism were detected by staff in 2007 and 2008.

The average IELTS scores of the international students were 6.7 for reading, 6.9 for listening and 6.6 for both speaking and writing. The consensus among staff is that the majority of students have poor writing skills. This is not the perception of the students. The majority (70%) of students rate their English language skills as good or very good. Only two students, one in 2007 and one in 2008, consider their writing skills as insufficient. No students considered their reading or listening skills inadequate. Several students, however, report having problems with speaking. CDU provides free English language tutorial sessions for international students but only one postgraduate Engineering student in 2008 and only two students in 2007 attended a tutorial session. Students generally did not feel the need for English classes and felt that their lives were already very busy.

The introduction sessions of the university and the School of Engineering were attended by 70 percent and 68% of the students respectively. Of those who attended, 67% found the university introduction very useful and 14% found it somewhat useful. 65% of the students who attended the Engineering introduction considered it very useful and an additional 24% considered it somewhat useful. One indication of the effectiveness of the introduction sessions is that in 2007 and 2008 most students submitted their assignments on time. Despite this, only 45% of the students say the introduction activities of the University and the School left them well prepared for their study. Students were asked what else the University could do to help them prepare for their study but they did not have many suggestions that staff would be willing or able to act on. Suggestions ranged from providing free accommodation to allowing students to resubmit plagiarised work and ignoring grammatical mistakes.

A very important role in helping student adjust to their study in Australia is played by other students. 89% of the students say they received help from other students. This included guidance and information about the requirements of study, help with finding accommodation and encouragement and emotional support. While students have many adjustment problems, very few students have problems making friends (7%).

Conclusions

International students experience a number of problems in Australia but these are not necessarily the same problems known to staff. Many students say they have financial difficulties and they try to resolve these by having a part time job. Staff members think that excessive work commitments detract students from their study but there is no correlation between the number of hours that students work and the number of hours they study. However, a number of students do not attend all classes because they are too busy and the negative correlation between the number of hours that student work and the perceived difficulty of the study may be an indication that some students overestimate their ability to combine work and study.

While staff think many students have inadequate English language skills (Robertson et al. 2000), students do not see this as a problem and consequently do not attend the tutorial sessions organised for them. The library session on plagiarism is well attended however and is considered useful by the large majority of students. The introduction sessions organised by the School of Engineering and the University are also considered useful but the guidance given by other international students is even more important in helping students adjust to the educational system. Although most students experience problems adjusting to the Australian assessment methods, they ultimately consider these assessment methods preferable to the assessment methods used in their home countries.

References

- Cargill, M. (1996). An Integrated Bridging Program for International Postgraduate Students. *Higher education research & development* 15(2) 177-188.
- Coley, M. (1999). The English Language Entry Requirements of Australian Universities for Students of Non English Speaking Background (1999). *Higher education research & development* 18(1) 7-17.

- Devos, A (2003). Academic Standards, Internationalisation, and the Discursive Construction of “The International Student”. *Higher education research & development* 22(2) 155-166.
- Felix, U. & Lawson, M. (1994). Evaluation of an Integrated Bridging Course on Academic Writing for Overseas Postgraduate Students. *Higher education research & development* 13(1)56-69.
- Hanassab, S. & Tidwell, R. (2002). Diversity, International Students and Perceived Discrimination: Implications for Educators and Counsellors. *Journal of Studies in International Education*, 6(4), 305-322.
- Ladd, P.D. & Ruby, R. (1999). Learning Style and Adjustment Issues of International Students. *Journal of Education for Business* 74(6), 363-367.
- Leder, G.C., & Forgasz, H.J.(2004). Australian and international mature students: the daily challenges. *Higher education research & development* 23(2)183-198.
- Ninnes, P., Aitchison, C., & Kalos, S. (1999) Challenges to Stereotypes of International Students’ Prior Educational Experience: undergraduate education in India. *Higher education research & development* 18(3) 323-342.
- Park, C (2003) In Other (People’s) Words: plagiarism by university students—literature and lessons *Assessment & Evaluation in Higher Education*, 28 (5) 471-488.
- Poyrazli, S. & Grahame, K.M. (2007). Barriers to Adjustment: Needs of International Students within a Semi-Urban Campus Community. *Journal of Instructional Psychology*, 34(1), 28-45.
- Robertson, M., Line, M., Jones, S. & Thomas, S. (2000). International Students, Learning Environments and Perceptions: a case study using the Delphi technique. *Higher Education Research & Development*, 19 (1), 91-102.
- Surdam, J.C. & Collins, J.R. (1984). Adaptation of International Students: A Case for Concern. *Journal of College Student Personnel*, 25(3), 240-245.

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