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Abstract

International university students arrive in their host country denuded of supporting social networks and confronting unfamiliar cultural and educational institutions, an experience that adversely impacts on their wellbeing and academic performance. Our study extends these general notions in the recent literature by investigating how, and to what extent, students renew their social networks. We adopt the social capital framework and conduct a participant survey in order to categorise and measure these different investments in clubs, employment, and friendships. Our results reveal a high degree of variability of social capital renewal between students and, among the more active, there remained a tendency to build close networks only with students from their own county of origin.

Introduction

The growth in the number of international students and their share of total enrolments has been one of the key features of the higher education landscape in Australia for at least a decade. It has provided financial windfalls for universities, an enriched and more diverse cultural experience on Australian campuses, and a range of economic and social benefits for the local community. For the international students themselves, it has yielded the opportunity to study in a new country and obtain a degree from a highly-regarded and mature university system. However, newly-arriving international students experience culture shock and are distant from their support system of family, friends and networks at a time when they are most needed. Many suffer from a sense of loneliness and unhappiness, which may impact adversely upon their academic performance as well as their general sense of wellbeing. The ability of international students to form new social networks in Australia may be an important factor in improving their general wellbeing and their ability to perform to their best potential in the classroom. In this paper we investigate the nature, extent and distribution of social-network building among a sample of international students at the University of Wollongong. This study is the first of its kind that we know of both within Australia and overseas. We use the term 'social capital' to capture these investments in networks and relationships. Section 1 briefly describes the position of international students in Australia. Section 2 analyses the problems facing international students in adapting to Australian society and educational institutions. Section 3 explains the methodology adopted. Section 4 reports our results. Section 5 discusses the results and offers some policy and conceptual implications, and section 6 concludes.

1. International students in Australia

Australia is one of five principal destinations for international students, the others being United States, United Kingdom, France and Germany. Relative to its GDP, total student enrolments, and population size, Australia is by far the major provider of higher education to international students [OECD 2006: Table C3.7b; Harman 2004: 102]. They constitute a large and expanding share of enrolments at Australian universities. In 2004, 228 555 international students attended Australian higher education institutions,² either onshore or offshore, representing 24 per cent of total enrolments. Our particular interest in analyzing the impact of studying within Australia, however, lies with onshore international students, 164 535 in total by 2004 and whose numbers expanded by 14 per cent per annum in the previous three years. Significantly, this recent growth coincided with a decline in new enrolments of domestic students such that onshore international students alone constituted 23 per cent of all commencing students by 2004. International students in 2004 came predominantly from the Asian continent (82 per cent), chiefly China, Malaysia, India and Singapore. In terms of gender, 53 per cent were male, 47 per cent female, and the broad fields of study were management and commerce (46 per cent), information technology (15 per cent), society and culture (8 per cent), and engineering and related technology (8 per cent) [DEST, 2005a: 17-24; DEST 2005b, Tables 52, 57].

The growing presence of international students has impacted on campus life and that of the surrounding community in a variety of manners. The Australian university campus has been enriched by the diversity of cultures, reflected, for example, in the languages spoken, the array of student organizations, and the range of national

cuisines available. This cross-cultural fertilization promises longer-term benefits through enhanced mutual understanding and future trade links.

While such benefits may be difficult to quantify, we can be more precise about the resulting financial benefits in the short term. The provision of educational services to international students may be regarded as a form of export earnings. Their share of total university income in 2004 was 15 per cent (\$1.95bn) [DEST 2005d]. Over the last decade or so universities have been able to use international student fee income to increase substantially their capital works programmes, in part to accommodate these additional students but in the process enhancing their asset values and ability to generate further income from non-student usage of these facilities.

In addition to fee income, international students spend on daily goods and services, particularly in the form of rent, groceries, transport, telephone, entertainment, health, and other course expenses. A study of the local economic impact of international students at Curtin University in 1994 found that they contributed \$42.5m in direct expenditure to the Western Australian economy in that year. Unusually for export income, the expenditure is undertaken locally: if indirect, or flow-on, effects from this expenditure are included the figure rises to \$54.5 million, which is the equivalent of raising State product by 0.12 per cent [Dockery et al 1999]. Another study of the economic impact of international students at the University of Wollongong in 1992 applied its results to national enrolments of international students to produce an annual expenditure figure of A\$1bn [Lewis and McKay 1995: 37]. This included student fees, which were 39 per cent of the total expenditure. A recent national survey estimated that international university students spent on average \$597 per week [UQSRC 2005: 20]. Aggregating this expenditure over the average 48 weeks per year spent in Australia by onshore international students produces an annual figure of \$4.7bn. Adding this to the fee income produces total annual expenditure in 2004 of \$6.65 bn, which is equivalent to 0.8 per cent of GDP and 4.4 per cent of exports [ABS 2006a; ABS 2006b]. Using the Curtin multiplier for indirect effects of onshore expenditures would imply that the impact of international student expenditure was \$7.98bn. Irrespective of the precise methodology adopted, it is clear that the international student market is a highly valuable one for both Australian universities and the national economy, and it has grown rapidly in importance over the last decade.³

While the economic and social value of international students is clear enough, the market is a volatile one. There is intense competition for international students from other countries such as Britain and the United States, while many of the developing nations that supply students are rapidly expanding their own education systems. Increased consistency and portability among many European nations under the Bologna Process has implications for Australia's role in international education and has led the Federal Government to release a discussion paper and initiate a communiqué to enhance tertiary education cooperation among Asia-Pacific nations [DEST 2006; Asia-Pacific Education Ministers' Meeting 2006]. Although Australian universities have benefited from the rapid growth in international student numbers over the last decade, the most recent figures for 2005-6 suggest a leveling off or even a small contraction in total onshore numbers [IDP 2006].

2. The challenge of the international student

Measures to enhance international cooperation may facilitate the movement of students across different national education systems. Nonetheless, students face many personal challenges in crossing national borders to study. These are akin to the situation confronting newly arriving immigrants. They usually encounter an unfamiliar culture with a different set of behavioural standards, new institutions and sets of rules associated with them, a foreign language, and an alternative natural environment and climate. This 'culture shock', as it is commonly termed [Oberg 1960], can manifest itself in many forms including anxiety, insecurity, insomnia, loneliness, and a general sense of unhappiness. [Church 1982; Rohrich & Martin 1991].

Australia presents particular challenges for international students. It is geographically isolated from the most populous regions of the world. Since most international students derive from Asian nations there is the addition of significant cultural and linguistic distance. Moreover, there are cultural issues that relate specifically to education including different educational philosophies, practices, and systems. Understanding different behavioural patterns in the classroom and the organizational structure of educational institutions are examples of this adjustment process [Patron, 2004]. It seems highly likely, therefore, that the main goal of international students, to study to achieve a good degree, will be adversely affected by culture shock. Once culture shock has been overcome, there exists 'the potential for authentic personal growth and personality development' [Patron, 2004: 62].

A recent longitudinal study of first year domestic and international students at Australian universities concluded that, 'the signs of the academic stress experienced by international students during their first year at an Australian campus are unambiguous' [DEST, 2005c: 76]. In particular, international students had more difficulty understanding course material than domestic students, felt greater discomfort participating in class discussions, and almost half of them were receiving lower grades than they had expected. Also of interest was the evidence that international students were much less likely to find orientation programs helpful in making a good start at university. This suggests, somewhat disturbingly, that they have not been sufficiently settled and orientated to take advantage of the type of official assistance that might have been expected to offer them the greatest benefit. Responses to questions on social integration provide further light on this problem – compared to domestic students, fewer felt a sense of belonging or of being a part of a group committed to learning [DEST, 2005c: 76-7]. In another survey of the social and economic security international students, two-thirds of respondents had experienced periods of loneliness or isolation [Deumert et al 2005: 3-5]

The transitional or adjustment period during which new migrants adapt to their environment may vary in length particularly according to different personality traits. However, the extent to which migrants form new relationships and develop social networks will also impact on the length and severity of the transition. Significantly, arriving migrants are separated from their traditional domestic support systems at a time when they are most needed. One might expect that building new friendships, networks and support systems in their host country would impact positively on the academic performance of international students. Directly, such connections are likely

to boost their language skills, help them to understand behavioural patterns more easily, and to learn the 'system' more quickly. Indirectly, the enhanced happiness and sense of wellbeing that such networks generate is likely to create a more conducive frame of mind for studying. Universities are aware of these relationships, some taking steps to smooth the transition process through mentoring and friendship programmes.⁴

Studies of high school students suggest that good support systems from family, school and the community impact positively on educational performance [Beaulieu et al 2001; Goldin & Katz 2001]. There is no existing research to investigate whether such a relationship exists at the tertiary level. Some studies use the term social capital to describe these investments in social relationships. Social capital is a commonly used term in the social sciences. Specifically, it is the idea of shared trust-based norms that foster cooperative behaviour, particularly in the form of goodwill and reciprocity. These shared norms vary from simple friendship to a complex set of values and doctrines. They may be shared through a bilateral relationship but are more commonly associated with a group or network of individuals. Networks may be informal in nature, for example based upon kinship, neighbourhood, or co-working, or they may be more formalized such as through a community organization. Organizations can include, for example, religious denominations, fraternal societies, trade unions, political parties, professional societies, sporting clubs, and environmental groups.⁵

Thus, for our purposes, social capital captures many of the ideas discussed above - supporting relationships, organizations, and social networks. One of the original and central insights in the literature is to view social capital as a means of enhancing the rate of human capital accumulation, particularly through the personal support, trust, and sharing of knowledge that social capital provides [Das Gupta 2005; Coleman 1988]. It is therefore appropriate for our longer term research agenda, which seeks to examine the impact of social capital style investments on a student's academic performance. In addition, this approach enables us to engage with a significant empirical literature that concludes that, both historically and currently, Australia has been well endowed with stocks of social capital [BTRE 2005; Keen 1999; Evans 2003; Ville 2005]. This suggests a munificent environment for those international students seeking to replenish their social capital stock denuded by the process of migration. Hence this paper analyses the pattern of international-student behaviour in relation to building new sources of social capital in their host country of Australia. Whilst several prior studies, such as those cited above, have drawn attention to the culture shock experienced by international students in Australia, none has attempted to document social capital renewal.

3. Methodology

University of Wollongong

This project's empirical focus is on international students enrolled at the University of Wollongong, which constitutes about 3.5 per cent of such students studying at Australian universities. International students are increasingly important to this institution, for whom annual export earnings have been estimated to exceed \$90m. [University of Wollongong 2006]. At 21 per cent, it is one of only six Australian universities that relies on international student fees for more than a fifth of its total income. The 2005-2007 University Plan seeks a strong international focus in all

university activities. It is premised on a striking and distinctive international student profile. The increase in international student numbers drove the university's expansion in the 1990s. They grew rapidly in absolute and relative terms to represent 19 per cent of total students by 2000, the 6th largest share among Australian universities. In the subsequent four years, this share expanded remarkably quickly to 36 per cent, much faster indeed than anticipated by the Internationalisation Strategic Plan [University of Wollongong 2004a: 9; University of Wollongong 2004b]. The most recent data for 2006, however, suggests a reversal of this trend with new enrolments dropping by as much as 5 per cent.⁶ A further defining feature of the current University of Wollongong profile is the high proportion of international students that are studying onshore - 88 per cent in 2000, one of the highest shares among Australian universities although this declined to 65 per cent by 2004. Taken together, this data indicates the importance of addressing the needs of an onshore international student body that is absolutely and relatively large, and has until recently been growing rapidly. Therefore, we are interested in the pattern of social capital renewal among international onshore students at Wollongong; particularly their involvement in clubs and societies, their part-time employment patterns, and their circle of friends, and the degree to which each of these aspects varies from student to student.

Exploratory fieldwork

The first stage of the project was to conduct two semi-structured focus group meetings, each consisting of eight students. The aims of these focus groups were to elicit information that would help formulate key questions and relationships to contribute to the structuring of a formal survey. Secondly, they would provide qualitative and individual information that could be used directly in the analysis stage of the project. The aims of the project were explained to the students along with the concept of social capital. They were asked their views on the adjustment problems facing international students. In addition, they were asked to comment on the suggested proxies for social capital, notably membership of clubs, employment, and friendships, and what they thought of the possible relationships between these and academic performance.

Quantitative fieldwork

While the exploratory stage provided insights into, and understandings of, the social capital investments of students and their relationship with student achievement and wellbeing, it would not be methodologically sufficient solely to extrapolate from this limited sample to the broader population of onshore international students, which currently number over 5000. Therefore, we invited international students to complete a survey, which was based on the information gained from the exploratory stage of the project. The survey instrument consisted of 36 questions. The first section elicited background details to obtain more information about the nature of our survey sample such as age, nationality, degree being studied, first language, and time spent, and place of residence, in Australia. The subsequent sections each asked a series of questions relating to a particular aspect of social capital. Questions on wellbeing at the time of arrival in Australia and subsequently were then asked, and the survey finished with four free response questions focussing upon valued services that the university and local community could or do provide for students. The survey was conducted online using international student email lists to elicit respondents who could access the survey, provide their consent, answer the questions, and submit it via a university

website. An incentive was provided to the value of \$10 in the form of either a book voucher or a movie pass. The survey was made available on four separate occasions of about three weeks each, the timing being designed to elicit responses at suitable times for students at the end or start of academic sessions.

4. Results

Sample size and representativeness

Between November 2005 and March 2006 we obtained 173 useable student responses.⁷ This represents about 3 per cent of the body of onshore international students at Wollongong. Although the students in the sample self-selected in the sense that they responded to our request, they closely resemble the characteristics of the population of onshore international students in Australia as a whole. The gender balance in our sample is similar to the national population with a ratio of male to female of 58:42, compared with 53:47 nationally. The principal region of origin of surveyed students coincided precisely with national figures with 82 per cent emanating from the Asian continent. Sixty per cent was undergraduate compared with 58 per cent nationally. The spread across disciplines again was very similar to national figures – 43 per cent were studying management and commerce against 46 per cent nationally. 23 per cent were from information technology, somewhat higher than the national figure of 15 per cent, reflecting Wollongong’s major role in this field [DEST 2005a: 23-4; DEST 2005b: Table 58].⁸

Student Background Characteristics

As a starting point, we offer some background characteristics on our student sample in terms of their country of origin, length of stay in Australia, location and type of accommodation, and their initial English language speaking skills. Respondents originated from 27 countries in total, with the dominant nation being China. 141 students came from 16 Asian countries. Table 1 contains a detailed breakdown of respondent numbers by country of origin.

Table 1. Survey Respondents by Country of Origin

Country of Origin	Number of Respondents	Percentage respondents
China	68	39.3
Singapore	12	6.9
India	14	8.1
Canada	9	5.2
Indonesia	9	5.2
Bangladesh, Malaysia, Thailand, USA	7 each	4.1 each
Iran	4	2.3 each
UK	3	1.7 each
Colombia, France, Ireland, Japan, Jordan, Kenya, Mexico, Nepal, Philippines, Sri Lanka	2 each	1.2 each
Croatia, Libya, Pakistan, Poland, South Korea, PRC-Taiwan	1 each	0.6 each
Total	173	

Note: Percentages may not sum to 100 due to rounding. China includes Special Administrative Region of Hong Kong

Their length of stay in Australia at the time of completing the survey ranged from a minimum of six months to a maximum of 8 years. The mean (and modal) length of stay was 24 months. Most students (88.4 per cent) resided in the 'greater' Wollongong area at the time of completing the survey.⁹ The remainder resided in Sydney and near suburbs. The dominant form of student accommodation was rented premises (71.7 per cent) followed by university Halls of Residence (23.1 per cent). Few students reported that they were living with a local family (2.9 per cent). Perhaps somewhat surprisingly, 45.1 per cent of respondents reported that they mainly interacted in their current place of residence with students from a different country of origin to their own. Nevertheless, a still sizeable 39.3 per cent of students reported mainly interacting with students from their own country of origin. Only 12.7 per cent of respondents reported that they mainly interacted with non-students. On a 5-point Likert scale, most students reported that, on arrival in Australia, their English speaking ability was average. At one extreme, 25.4 per cent reported that their English speaking ability was very good, whilst 2.3 per cent reported that their English speaking ability was very poor. Overall, the number of students that reported their initial English speaking ability as good or very good (44.5 per cent) was more than twice the number that reported their initial English speaking ability as poor or very poor (21.4 per cent).

Club Activity

Students were asked about their involvement in seven categories of university based, and six categories of non-university based, clubs or organisations. The survey responses revealed a total of 157 student memberships of university based clubs, and 88 student memberships of non-university based clubs¹⁰. A detailed breakdown of membership by university and non-university based club category is provided in Table 2.

Table 2. Club Membership by Category

Club Category	University Based (%)	Non-University Based (%)
Nationality	43 (27.4)	17 (19.3)
Faculty	20 (12.7)	
Sport	35 (22.3)	20 (22.7)
Religious	21 (13.4)	19 (21.6)
Social	16 (10.2)	20 (22.7)
Political	2 (1.3)	3 (3.4)
Other	20 (12.7)	9 (10.2)
Total	157	88
Maximum	4 (3 students)	3 (3 students)
Minimum	0 (58 students)	0 (101 students)
Mean	0.91	0.51
Standard Deviation	0.84	0.69

Notes: The membership numbers reported in columns two and three are also reported as percentages of the total number of student university and non-university club memberships (157 and 88, respectively). Percentages may not sum to 100 due to rounding.

Overall, student memberships in university based clubs and organisations were approximately twice the number of that for non-university based clubs and

organisations. Involvement in sport and nationality based clubs were the most prevalent, religious and social organisations also being relatively popular. Perhaps not surprisingly, there was little involvement in political organisations amongst this sample of students.

Three students each reported being a member of four university based clubs. At the other extreme, 58 students reported that they were not involved with any university based club or organisation. The mean number of university based club memberships per student surveyed was 0.91. With regard to off-campus activity, three students reported membership of three clubs whilst 101 students reported no non-university club membership. The mean number of non-university based club memberships per student surveyed was 0.51. The large numbers of students not involved in any type of organised on-campus or off-campus activity (41 students, or 23.7 per cent of our sample) is somewhat surprising given the emphasis that the participants of our focus group interviews placed on achieving a balance between study and non-study activities.

Perhaps a better metric of student involvement in clubs is the number of hours devoted to club activities per week, the details of which are set out in Table 3. The minimum hours per week, and the most common response, was zero. The maximum reported hours per week was 20.

Table 3. Frequency of Weekly Hours Devoted to Club Activities

Hours per Week	Student Numbers (%)
0	54 (31.2)
1	27 (15.6)
2	32 (18.5)
3	16 (9.2)
4	12 (6.9)
5	16 (9.2)
6	7 (4)
8	2 (1.2)
10	1 (0.6)
11	1 (0.6)
12	1 (0.6)
20	2 (1.2)
Not indicated	2 (1.2)
Mean Hours per week	2.33
Standard Deviation	2.98

Note: Seventeen students did not respond to this question. Of these, fifteen indicated they were not a member of any club, so we have assumed zero club hours for these students. Percentages may not sum to 100 due to rounding.

Another important aspect of club membership is the nature of the interactions that students experience as members. In particular, we asked students to report on whether they interacted mainly with club members from their own, or from a different, country of origin. Of those students that responded to this question (138 students), approximately 63 per cent indicated that they mainly interacted with members from a different country of origin from their own. A final aspect of club membership that we investigated was the intensity of club membership. Approximately 19 per cent of the students who responded to this question and were involved in clubs (139 students)

indicated that they were *highly active* members in that they regularly attended club events and contributed to the organisational effort. Approximately 47 per cent indicated that they were *active*, in that they regularly attended club events, whilst the remainder indicated that they were *passive* club members who rarely attended club meetings and activities.

Employment and Voluntary Work

Students were asked about the quantity and nature of any paid work they regularly performed whilst studying. Fifty eight students (33.5 per cent of our sample) responded that they performed no paid work, whilst one student reported completing 38 hours per week in paid employment. In between these two extremes, 103 students reported completing between 2 and 20 hours of paid employment per week (11 students did not respond to this question). The proportion in paid employment (60 per cent) is identical to that in a large national survey of first year students that included 185 international students. The mean number of weekly paid hours of employment for our students was 12, which compares closely with the respective national figure for international students of 11 [DEST (2005c: 55)]. Of the 104 students who completed weekly paid employment, 71 (68.3 per cent) reported that their English speaking skills improved, whilst 32 (30.8 per cent) reported that their English speaking skills did not improve, as a result of their involvement in paid work (one employed student did not respond to this question).

This mixed picture is not too surprising as many students reported that their English speaking skills were either good or very good on arrival in Australia, but also due to the varied nature of some of the employment tasks reported, as summarised in Table 4 below. The most commonly reported employment category (34.6 per cent) was the hospitality industry. Perhaps surprisingly, almost the same numbers of students were involved in education, usually as tutors or laboratory demonstrators, as were working in the shop/sales/marketing sector.

Table 4. Student Employment Frequencies by Employment Categories

Employment Category	Student Number (%)
Hospitality	36 (34.6)
Shop/Sales/Marketing	20 (19.2)
Education	19 (18.3)
Consulting/Office Admin/IT Support	16 (15.4)
Manual Labour	5 (4.8)
Nursing	3 (2.9)
Other	3 (2.9)
Nature of employment not stated	2 (1.9)

Students were also asked about their involvement in voluntary, unpaid work. Thirty nine reported that they spent, on average, about five hours per week in voluntary work. However, 134 students either reported not doing any voluntary work at all or did not respond to this question. Students were also asked to report on their motivations for working voluntarily. Whilst motivations were diverse, and some were difficult to categorise, more than a half of students who worked voluntarily did so for what could be regarded as extrinsic reasons. For example, one student responded that they worked voluntarily because “I feel good to help the poor and needy people”.

Others were motivated by more intrinsic factors, such as the desire to gain work experience and build up personal networks¹¹.

Friendship Groups

Students were asked to report on the number, and particular characteristics, of their university and non-university friends. Table 5 summarises the data on the number of friends and the weekly hours spent socialising with them outside of formal clubs and organisations. Two students reported having zero friends whilst seven reported having 20 or more friends. On average, each student had about six friends and spent nearly eleven hours per week socialising with friends outside of formal club or organisational events.

Table 5. Number of Friends and Hours Spent Socialising per Week

	Number of Friends	Weekly Hours Socialising
Minimum	0	0
Maximum	30	80
Mean	6.2	10.9
Standard Deviation	5	12.3
Mode	5	5
No response	1	3

Not surprisingly, a large majority of the students in our sample (85 per cent) mostly befriended other university students, and 56.7 per cent reported that most of their friends came from the same country of origin. Finally, 60.7 per cent of students reported that most of their university friends were in the same year of study as their own.

Changes over Time

We asked students to report on the changes they had experienced during their time at university with regard to their English speaking ability, their residential location, and their self-perceived sense of wellbeing. One student reported that their English speaking ability had changed from very poor to very good, whilst two students reported a change from poor to very good, during their time at university. Most students reported more modest improvements: for example sixteen (9.3 per cent) reported a two-place improvement on the 5-point Likert scale, such as from poor to good or from average to very good. 73 (42.2 per cent) reported a one-place improvement only, whilst 67 (38.7 per cent) reported no change, in their English speaking ability. Again this latter result should not be too surprising as 77 (44.5 per cent) students reported their initial English speaking ability as either good or very good. Finally, only two students reported that their English speaking abilities had deteriorated over time, in both cases by one place only (two students did not respond to this question). So it seems to be the case, as would be expected, that most students experienced an improvement in their English speaking ability while a university student.

We also obtained data on the number of times students had changed their place of residence whilst at university. The data are presented in Table 6. Only 46 students experienced residential stability (no moves). At the other extreme, 29 students changed residence three times, whilst 20 students changed residence four or more

times. Given that the mean months in Australia for our sample was 24, it appears that many students experienced relative residential instability.

Table 6. Frequency of Residential Mobility over Time.

Number of Moves	Frequency
0	46
1	26
2	51
3	29
4	10
5	5
6 or more	5

Finally, we obtained data on their wellbeing by asking each student to report their initial and current level of happiness. The data are summarised in Table 7. A large number of students (84 or 48.6 per cent) reported an increase in happiness, whilst a smaller but still sizeable number (32 or 18.5 per cent) reported a decrease in happiness, over their time at university. More students reported high or very high levels of happiness (from 65 to 93), and fewer students reported low or very low levels of happiness (from 39 to 15), in the current period compared to their initial experience. The most common change was a one-point increase in happiness (59 students) followed by no change in happiness (57 students). Conversely, nearly as many students experienced a one-point decrease in happiness as did those that experienced a two point increase in happiness. So, whilst these data point to favourable changes in well being for most students, there were still a sizeable number who had experienced a decrease in happiness, whilst a student at this university.

Table 7. Initial and Current Well-Being

Happiness Level	Initial (%)	Current (%)	Change (%)
Very High	23 (13.3)	29 (16.8)	
High	42 (24.3)	64 (37)	
Moderate	69 (39.9)	65 (37.6)	
Low	28 (16.2)	13 (7.5)	
Very Low	11 (6.4)	2 (1.2)	
Happier *3			3 (1.7)
Happier *2			22 (12.7)
Happier *1			59 (34.1)
No Change			57 (33)
Less Happy *1			21 (12.1)
Less Happy *2			9 (5.2)
Less Happy *3			2 (1.2)

Free Response Questions

The final five questions of the survey asked students to identify those existing university based and community based services that most assisted them, and those that could additionally be provided to most assist them, with their academic studies.

Most of the responses provided in this section identified important aspects of educational rather than social capital.

Students selected the university library as the single most valued university service (61 students, or 42.4 per cent of respondents). Other cited services included the provision of online teaching and university workshops that targeted the improvement of English language skills in particular. Students mentioned several additional university services they would favour including additional workshops and study centres, more contact with academics, and the need for greater student interaction.

Among existing community services, students emphasised the value of their local community library. Other common responses included the importance of public transport, moral support for students, and community based clubs and societies. Those that responded to the question concerning additional community services wrote about the importance of finding better ways of interacting with the local community culture, and thereby more effectively settling into the local environment.

Responses to the final question, eliciting comment on any other service/issue not so far canvassed, concentrated heavily on the following three important social capital related themes. Firstly, 25.8 per cent of respondents identified the presence and support of family and close friends as being very important for academic success. Secondly, many respondents emphasised the importance of organised social events and activities as a means of making friends and expanding support networks. Finally, and consistent with our findings from the focus group interviews, many respondents identified the importance of maintaining a high level of general wellbeing and happiness.

Aggregate social capital stock of international students

It is now possible to estimate the aggregate social capital investments of international students at Wollongong. This method uses hours per week as a common currency across its four types of clubs, friends, employment, and voluntary work. No weighting is adopted between the four forms. Thus, across all students surveyed, the mean weekly time spent on social capital enhancing activities was 21.6 hours distributed as 10.7 (50 per cent) on friendship, 2.3 (11 per cent) on clubs, 7.5 (37 per cent) on employment, and 1.1 (6 per cent) on voluntary work. This is perhaps a reassuringly substantial investment of time on social capital enhancing activities, particularly the predominance of friendship hours. Some of these activities may have other principal motivations, such as income from employment and enjoying leisure as a consumption good, but social capital enhancement is nonetheless a positive externality. However, it should also be noted that there is a mixed experience across students – each activity showing significant variations in terms of maxima and minima and relatively high coefficients of variation of about 1 or higher.

Table 8. Aggregate Social Capital Hours

	FriendHrs	ClubHrs	PaidHrs	VoluntHrs	AggSCHrs
TotalHrs	1848	398	1294	193	3733
Respondent Mean	10.9	2.3	8	1.43	21.6
Sample Mean	10.7	2.3	7.5	1.1	21.6
Std Devn	12.3	3	7.6	3.46	16.55
Coeff Variatn	1.1	1.3	0.95	2.4	0.77
Min	0	0	0	0	0
Max	80	20	38	20	84

5. Discussion

Our study confirms that international students do suffer a form of culture shock when they first arrive in Australia; most recording moderate to very low levels of happiness: 'I had a lot of trouble to adjust when I first came as an international student' noted one respondent.' Most students subsequently became relatively happier helped no doubt by developing a circle of friends in almost all cases. Many also built social networks through membership of clubs and paid or voluntary employment. Besides contributing to their general wellbeing, such networks may have aided students in their study, a point recognised by some respondents for whom it was in part a motivational factor, that is, an act of volition to invest in their own social capital. Religious organisations seem to be particularly valued. One student noted that the Muslim Association, 'provides us with a place for pray, study, internet, printing', another noted, 'correcting my homework by my local Christian fellow'. Some, indeed, called for more networking opportunities and integration into the local community. Language improvements, study assistance, access to facilities, and acquiring cultural and institutional knowledge were revealed as the key academic benefits.

Thus, we might be able to build a typical international student profile as someone who comes from a non-English speaking Asian nation. On their arrival they have relatively weak English language skills and suffer relocation unhappiness but find various coping strategies particularly through social networks. However, on the downside, there appears to be a significant minority that do not embrace the opportunities to any significant degree. All of the summary data in Table 8 indicates significant variations among students in their degree of involvement in social networks. Moreover, nearly a quarter of students surveyed were not involved in any on- or off-campus organised activity. Most club memberships appear to have involved relatively minimal commitments of time and energy. The degree of residential instability may also be a cause for concern and indicative of disrupted social networks. Nineteen per cent had become less happy during their time in Wollongong.

Amongst the more active networkers there remain some concerns. Most of this network building occurred on campus among other students, with only a minority apparently forging relationships in the local community that might have provided them with insights into the broader Australian culture. This evidence must be set within the context of the prevailing high levels of social capital in Australia identified in our discussion of the broader empirical literature in section 2. Student friendships

were predominantly with other members of the same nationality or other international students, with few connections to domestic Australian students who would better understand the institutional and behavioural characteristics of the local educational system. Finally, most interaction was among peers, suggesting little evidence of mentor style networking with senior students who might help new starters establish themselves, particularly if they were from the same country.

Somewhat ironically, another cause for concern is the risk of excessive investments in social capital type activities. While social networks can aid students through enhanced institutional knowledge and happiness, too much time spent here incurs an opportunity cost that will detract from study hours. A minority of students reported club, friendship or employment hours so large as likely to impede on their study time. Some students acknowledged the importance of achieving a balance between their university study and other activities. Thus, the relatively high coefficients of variation reported in Table 8 are perhaps indicative of the inability of some international students to secure the right balance in their life.

6. Conclusion

This paper reports and analyses the results of a survey of international students conducted at the University of Wollongong, a leading educator of international tertiary students in Australia, which investigated their investments in social capital and its general relationship with personal wellbeing and academic study. Consistent with psychology theories of culture shock, many students experienced relative unhappiness and disorientation on arrival from overseas. Most managed to build up a circle of friends and became happier over time. However, these friendships were often concentrated upon student peers from the same nation, which provided a sense of fellowship and empathy but limited opportunities to build connections with different types of people and to learn more about Australian culture and institutions. A significant minority made little or no use of more formal organisations widely associated with the benefits of social capital in the conceptual literature. A majority found paid employment, often for quite long hours and with limited social capital benefits besides language improvements in some cases. Many students would derive more of the benefits of social capital by committing a greater amount of time to local (Australian) and multicultural clubs and organisations, including off-campus, and fewer hours to paid employment particularly in manual and catering jobs, although there may be financial constraints in so doing. A small but notable minority suffer from a poor sense of wellbeing and fail even to engage with the university community. Finally, many students encountered a high degree of residential instability, which was likely to have disrupted both their social connections and academic study. Policy implications, therefore, centre on identifying and assisting the minority of socially disconnected students, encouraging networking students to broaden their contacts and to get the correct balance of social and academic activity, and to address some of the accommodation problems experienced by international students.

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1 We gratefully acknowledge a Faculty Research Grant provided by the Faculty of Commerce at
2 the University of Wollongong, and research assistance provided by Craig Perry.
3 That is the 39 'Table A' higher education providers which are eligible for all grants under the
4 Higher Education Support Act (2003).
5 Also see Kenyon and Koshy 2003
6 For example, the 'Momentum Mentor Project' introduced at the Univeristy of Wollongong in
7 2006. <http://media.uow.edu.au/releases/2006/0526a.html>. Accessed 2.6.2006. Westwood and
8 Barker 1990.
9 Dasgupta 2005 provides a recent update of a substantial conceptual literature on social capital.
10 Information obtained from Planning Services, University of Wollongong, 22.6.2006.
11 In total there were 193 valid responses but we decided to exclude 20 students who had been in
Australia for less than six months on the grounds that they would have had limited
opportunities to form social networks or comment on changes over time.
The data in these sources relates to the 2004 body of international students, our surveys were
conducted in 2005-6 many of whom would have been enrolled in 2004. Except for country of
origin, the national data covers all overseas students, onshore and offshore, while our sample
is for onshore only.
Specifically, the Wollongong statistical subdivision, which incorporates the local statistical
areas of Wollongong, Kiama, and Shellharbour.
Because of multiple club memberships this does not mean that these were necessarily the
numbers of student members of university and non-university clubs, respectively.
Of course it is possible that at least some students may be motivated by a combination of
intrinsic and extrinsic factors.