Introduction: Defining and quantifying study abroad

Study abroad encompasses activities through which students receive academic credit from their home education institution for study undertaken in another country. It includes undergraduate and postgraduate tuition, supervised research and curriculum-related work experience, such as internships. It also includes study exchange programmes between domestic and foreign institutions. A common feature of study abroad is that it is not for the purpose of gaining an award (i.e. a degree or qualification) from a foreign host institution, but instead involves students undertaking discrete units of study, generally for the purpose of gaining academic credit that will be recognised by the award-granting institution they are enrolled in, in their home country. This is a distinctly different activity from other forms of outward student mobility, which involve study towards a full qualification that is granted by a foreign host institution.

Study abroad data can be readily collected by institutions that send their own enrolled students overseas. However, counting international students who have enrolled to complete a full award course in other countries generally requires those other countries to report data on the nationality of incoming students, perhaps to a global database such as the one hosted by the United Nations Educational, Scientific and Cultural Organisation (UNESCO) Institute of Statistics (UIS, 2014).

A substantial quantitative difference between study abroad and award (or full-degree) mobility is readily apparent from data on United States of America (US) students studying outside the US. The annual report Open Doors by the Institute of International Education (IIE)
identified 273,996 US students studying abroad in 2010-11 (Farrugia, Bhandari & Chow, 2012). The IIE, which administers the annual Open Doors survey, also conducted a parallel survey in foreign host countries to count the number of US students studying full-degree courses. That survey identified 46,635 US students studying full degrees in other countries in 2010-11 (Belyavina & Bhandari, 2012).

The UNESCO Institute of Statistics (UIS) counted 47,123 US students studying in other countries in 2011, which is roughly equivalent to the US survey count of full-degree students and clearly did not capture the much larger cohort of over a quarter of a million US study abroad students. The relevant UNESCO data definitions indicate that only students enrolled in courses of at least two years’ duration are counted in the UNESCO data collection (UIS, 2014).

A robust picture of Australian university students studying abroad is emerging from a national survey first undertaken in 2005, when over 7,000 students from Australian universities were identified as studying abroad (Olsen, 2008), rising to over 24,000 students in 2012 (AUIDE, 2013). In comparison, UNESCO has reported a relatively static annual figure of around 10,000 Australian students studying in other countries over five years up to 2012 (UIS, 2014). As was the case with the US example above, it is likely that this UNESCO statistic represents a separate cohort of Australian nationals who are studying full-degree courses in other countries and does not include Australian study abroad students. However, some degree of overlap between these two cohorts cannot be ruled out.

In 2005, it was estimated that 4.8 per cent of completing Australian undergraduates had an overseas study experience during the course of their degree (Olsen, 2008), an estimate which rose steadily in subsequent years, reaching 13.1 per cent in 2012 (AUIDE, 2013). By comparison, UNESCO has reported a relatively static annual figure of about 10,000 Australian students studying in other countries over five years up to 2012 (UIS, 2014). As was the case with the US example above, it is likely that this UNESCO statistic represents a separate cohort of Australian nationals who are studying full-degree courses in other countries and does not include Australian study abroad students. However, some degree of overlap between these two cohorts cannot be ruled out.

The objectives of study abroad

Increasingly, governments and education agencies are promoting study abroad and providing incentives to do so, particularly for undergraduate students, for whom study abroad may provide a transformative experience at an early point in their academic development (Rowan-Kenyon & Nichaus, 2011).

A recent US international education strategy Succeeding globally through international education and engagement (US Department of Education, 2013) defined three main areas of benefit that may arise from international study experience before graduation. These largely involve gaining skills to:

- Work in a global context and enhance their country’s economic competitiveness.
- Deal with emerging global challenges (including financial, environmental and health-related challenges).
- Engage both with international collaborators and with an increasingly multicultural population at home.

Various US agencies have established aspirational targets for growth in the US’s study abroad numbers, including the 100,000-strong initiative to China, the 100,000-strong in the Americas (encompassing Latin American and Caribbean destinations) and the Generation Study Abroad initiative intended to double study abroad numbers by 2020 (IIE, 2014).

The UK’s Strategy for Outward Mobility (UK Higher Education International Unit, 2013) acknowledged the economic importance of providing domestic students with international study experiences and also prioritised the comprehensive reporting of data on UK students’ outward mobility to monitor trends. Enhancing data and data reporting is also an important strategic goal for wider-Europe (Kelo, Teichler & Wächtner, 2006; Souto-Otero et al., 2013).

Australian Government agencies and educational institutions have supported outward student mobility,
including study abroad, for many years through a range of scholarship and loan programmes (Australian Government, 2013). More recently, the Australian Government has supported study abroad under the New Colombo Plan (Department of Foreign Affairs and Trade, 2013). Australia has also recognised a need to strengthen the reliability of its data sources on outward student mobility (IEAC, 2013).

Growing study abroad numbers through democratisation

Salisbury et al. (2009) described democratising undergraduate study abroad as a major next step in the evolution of American education, indicating intent to expand study abroad opportunities beyond the limited demographic groups that currently dominate it. Twombly, Salisbury, Tumanut and Klute (2012) have described the predominant demographic profile within the US study abroad population as being female students, generally from higher socioeconomic backgrounds, who have travelled previously, have university-educated parents and study in the arts, humanities and social sciences. Bell and Watkins (2006) noted a similar dominant profile in ERASMUS exchange students in Europe and Daly (2011) reported much the same for Australian exchange students.

Doyle et al. (2010) suggested that the demographic profile of students who study abroad is constrained by perceived and actual barriers such as cost, which may be both financial or opportunity cost, an example of the latter being where students must waive potential income from a part-time job in order to study abroad. Perhaps for this reason, uptake of study abroad by part-time students and community college students has been reported as being relatively uncommon in the US (Desoff, 2006). Paus & Robinson (2008) also discussed curriculum as a significant barrier, where a student may be unable to include units of study abroad in a fixed and inflexible programme. Perhaps for this reason, study abroad is traditionally reported as more commonly pursued by students studying liberal arts degrees, rather than students studying less-flexible science, technology, engineering and mathematics (STEM) degrees, which may have a lower capacity for including elective units.

While credit recognition for study abroad is increasingly commonplace, it is not commonly graded credit, which may be perceived as a disadvantage by students seeking to maximise their grade point average, reported as a particularly important issue for students in pre-professional degrees such as medicine, architecture and engineering (Stroud, 2010).

Paus & Robinson (2008) also noted that while many students in the first year of their study programme expressed enthusiasm to study abroad, this was often not realised over the course of their degree. The authors attributed this to curriculum inflexibility and lack of advocacy by faculty, particularly in STEM-related fields.

The following analysis of Australian study abroad data outlines what is currently known about the demographic profile of the Australian study abroad population. The analysis focuses on whether particular groups are under-
Data on Australian study abroad students

The annual survey of Australian universities undertaken by the Australian Universities International Directors Forum (AUIDF) since 2009, with two earlier surveys reported for 2005 and 2007 provides the best picture of study abroad activity from Australia at a national level. The data do not identify students or their home institutions, but do provide a range of demographic details about the student cohort.

As shown in Figure 1, the number of Australian university students studying abroad is clearly growing strongly. In 2012, there were 24,763 instances of Australian university students studying abroad, with over 17,000 involving undergraduates.

Instances of short-term study abroad are becoming increasingly popular with students from Australian universities. This is also a common trend in other countries with study abroad programmes (Chieffo & Griffiths, 2004). In the 2005 survey, 46 per cent of all instances of student mobility were short-term programmes (less than one semester), which rose steadily to 66 per cent in the 2012 survey. These instances of short-term student mobility more commonly involve destinations in Asia. For example, in 2012, 68 per cent of short-term student mobility was to China, compared with only 19 per cent to the US.

Figure 2 summarises AUIDF data of study abroad students from Australian universities according to the destination region, the level of student course, and the field of education of the course being undertaken by study abroad students. The graph represents 24,763 students engaged in study abroad in 2012.

With respect to destination, about one-third of study abroad in 2012 was to Asia, a proportion that has steadily grown since 2005, when it was 26 per cent. Of this cohort, 2,145 students studied in China and 835 in Japan. The major English-speaking destinations, the US (3,672), the UK (2,115), Canada (1,277) and New Zealand (723), when combined, represented just one-third of all study abroad instances in 2012. Apart from the UK, the main European countries attracting study abroad students from Australian universities were Italy (996), France (974) and Germany (933) (AUIDF, 2013).

Figure 2 also indicates that undergraduate students represented nearly three-quarters of all study abroad in 2012, which is reflective of their proportional representation in the overall student population. However, postgraduate research students were over-represented, making up 11 per cent of the study abroad population, although only 3 per cent of the overall student population...
population. The duration of study abroad varied according to level of study. More than 40 per cent of undergraduate instances exceeding one semester, but few postgraduate research student instances did. It is likely that many of the undergraduates studying for more than one semester were in a formal study exchange programme. However, the available data could not be desegregated sufficiently to confirm this (AUIDF, 2013).

Study abroad propensity across different fields of education is commonly reported to be skewed towards an over-representation of arts, social sciences and humanities students and an under-representation of science, technology, engineering and mathematics (STEM) students (Paus & Robinson, 2008). In 2012, the largest proportion of Australian study abroad experiences were in the arts etc. fields (29 per cent), while 18 per cent were in STEM fields. However, a proper estimate of propensity also needs to consider the base population.

When compared with the base university student population in 2012, arts etc. fields (21 per cent of base) did appear somewhat over-represented in the study abroad population (29 per cent), although STEM fields (19 per cent of base) seemed relatively-well represented in the study abroad population (18 per cent). The most under-represented area was management and commerce, representing only 14 per cent of the study abroad population, but 22 per cent of the base population. This is a surprising finding given a key objective of study abroad is to enhance Australian students’ ability to engage in international business. This finding suggests there is a need to better promote the benefits of study abroad to students and faculty in management and commerce.

As noted, study abroad participants are often reported as more likely to be female. The AUIDF (2013) reported 59 per cent of the mobility in 2012 was by women. However, this should be considered in the context that the Australian base population of domestic higher education students comprised 58 per cent women in 2012. Thus, at least in recent years, the higher proportion of women in the study abroad population does not suggest that Australian female university students have a substantially higher propensity to study abroad than their male counterparts.

**Data on student propensity for studying abroad**

The Australian Survey of Student Engagement (AUSSE) was conducted across Australian universities from 2007 to 2012 (ACER (Australian Council of Educational Research), 2014) and included a question to assess students’ awareness of, and participation in, study abroad and student exchange programmes. The survey provides a useful source of demographic data on students who do or do not study abroad.

In 2012, a survey of over 17,000 Australian domestic university undergraduate students found that 31 per cent of first year students planned to (29 per cent), or had already (2 per cent) studied abroad. However, only 20 per cent of later year students were still planning to (12 per cent), or had already (8 per cent) studied abroad. The unweighted size of the first and later year cohorts surveyed in 2012 were similar (both exceeding 8,000 students).

To frame this finding in a different way, while only 33 per cent of first year students reported that they would not be studying overseas during their degree, 56 per cent of later year students reported the same. This same disparity in early intention versus later realisation of that intent can be seen in the annual AUSSE survey findings back to 2008, when nearly 29 per cent first year students planned to (27 per cent), or had already (two per cent) studied abroad, while only 18 per cent of later year students still planned to (12 per cent), or had already (six per cent) studied abroad. These data suggest that many Australian students failed to realise an initial intention to study abroad.

The propensity of Australian domestic students studying under different life circumstances was also investigated, by considering the variables of attendance status, employment while studying and socioeconomic status.

As shown in Table 2, it was clear that part-time students in 2012 had a lower propensity to have studied abroad than full-time students and were less likely to be planning to study abroad. A noticeably higher proportion of part-time students also did not know about the

<table>
<thead>
<tr>
<th>Study abroad or student exchange</th>
<th>Student year</th>
<th>Total</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>1st year</td>
<td>Later years</td>
</tr>
<tr>
<td>Do not know about</td>
<td>7%</td>
<td>8%</td>
</tr>
<tr>
<td>Have not decided</td>
<td>28%</td>
<td>16%</td>
</tr>
<tr>
<td>Do not plan to do</td>
<td>33%</td>
<td>56%</td>
</tr>
<tr>
<td>Plan to do</td>
<td>29%</td>
<td>12%</td>
</tr>
<tr>
<td>Done</td>
<td>2%</td>
<td>8%</td>
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<tr>
<td>Total</td>
<td>100%</td>
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</tr>
</tbody>
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Source: ACER: unpublished data collected in the 2012 AUSSE from 17,585 domestic students.
opportunities available to them. It was also possible to independently sort study abroad responses by whether or not students were in paid employment. No clear correlation between paid employment and study abroad propensity was found.

However, a clear correlation was found between Australian students' socioeconomic status (SES) and their propensity to study abroad. As shown in Table 3, the AUSSE survey confirmed a common finding in other countries, such as the USA (Salisbury et al., 2009) and the UK (Brooks and Waters, 2011) that socioeconomic status positively influences student propensity to study abroad. From a cohort of Australian domestic students surveyed in the 2012 AUSSE, 20 per cent of the low SES cohort was planning to or had already studied abroad, compared with 24 per cent of the middle SES and 29 per cent of the high SES cohorts. Nonetheless, much like part-time study, low SES status was a negative influence, but not an absolute barrier. There was only a weak correlation between SES status and attendance type (full or part-time) and the calculated effect size was minor (ACER, 2014, pers. comm.). This suggests that attendance type and SES status are largely independent influences on Australian domestic students' propensity to study abroad.

An important finding from this survey data is that more than 7 per cent of domestic students surveyed in 2012 reported they did not know about opportunities for study abroad or student exchange, with slightly higher proportions of around 9 per cent and 11 per cent for the low SES and part-time student cohorts respectively. The proportion of students reporting that they did not know about opportunities for study abroad or student exchange has changed only marginally in previous years of the AUSSE survey, with between 7 and 8 per cent of domestic students surveyed, in each year from 2007 to 2012, reporting not knowing of these opportunities. This suggests a small, but somewhat intractable lack of awareness of the opportunities available.

### Conclusions

Australian study abroad has become a well-established feature of Australian higher education and looks set to continue growing in parallel with increasing support and promotion by both education institutions and governments. Although the volume of activity may appear modest, the proportion of Australian students studying abroad has been found to be on par with nations such as the US.

The AUIDF survey represents the most comprehensive and timely national information source on Australian university students studying abroad. The survey-based data collection does not allow disaggregation of some potentially distinctive features of Australian undergraduate and postgraduate student mobility. It is also difficult to differentiate trends with respect to different destination countries and regions. Nonetheless, the survey’s adherence to consistent measures across sequential years is commendable and allows monitoring of some key trends over time. This data source may grow in detail and sophistication as outward student mobility attracts greater public interest in Australia.

The US has recognised that further increasing its already substantial numbers of students studying abroad requires further diversification of its current study abroad population, a process referred to as democratisation (Salisbury et al., 2009). If Australia has similar aspirations, there is a need for national-level data that will enable the monitoring of trends over time and provide a detailed understanding of the opportunities available to students.
demographic profile of those who study abroad and those who do not.

The results of the analysis outlined in this paper are counter to some traditional assumptions about study abroad, particularly that female students are over-represented in the study abroad population. In Australia, this seems only to be true to the extent that the predominance of women in the study abroad population reflects their predominance in the general student population.

The over-representation of women may have been true in the past in Australia and is still apparent in current US study abroad data (Farrugia et al., 2012), perhaps arising from an over-representation of arts, humanities and social sciences students in the study abroad population, who are more often female, and the under-representation of students in the STEM disciplines, who are more often male. It is possible that the recent growth in short-term study abroad opportunities has enabled more students to bypass traditional problems with programme inflexibility in STEM courses, because students are now more able to study abroad during semester or summer breaks.

Another important source of historical data on Australian student mobility is the AUSSE, a national survey of Australian university students, which provides a valuable source of data on the demographic context of students who chose to study abroad, as well as those who do not. Comparison of the early intentions of first year students and the actual participation of later year students suggests that study abroad is an immediately attractive proposition for Australian students, but as some students work through their degrees, they are unable to fulfill that initial intent, perhaps due to barriers such as financial cost, opportunity cost or programme inflexibility.

These findings suggest that there remains a need to convince all Australian university students that there is a tangible return on investment in the cost of studying abroad. Paus & Robinson (2008) have argued that academic staff are key to both establishing study abroad programmes and also encouraging students to participate in them. Recognition of credit gained through study abroad is likely to be a key issue, as is the awarding institution’s acknowledgement that study abroad delivers valuable and relevant learning outcomes for graduates. AUIDF (2013) reported that 93 per cent of study abroad experiences in 2012 gained credit. Pitman and Broomhall (2009) reported that 71 per cent of Australian universities, which reported providing graduate attributes statements in 2009, listed intercultural awareness and international perspective as key competencies.

Analysis of the AUSSE survey data also indicated a correlation between students’ socioeconomic status and their propensity to study abroad, as has been reported elsewhere (Doyle et al., 2010). However, neither low socioeconomic status nor part-time attendance were found to be absolute barriers. Again, the increasing availability of short-term study abroad experiences may be making study abroad a more feasible option for students with limited financial resources or limited time. It may be the growing availability of short-term study abroad options that becomes the most important factor in enabling the democratisation of study abroad opportunities (Desoff, 2006; Twombly et al., 2012).

For Australia, studying abroad for credit rather than for a full award qualification has become the dominant form of outward student mobility in recent years. The global significance of such non-award study is not apparent in traditional data sources on international student mobility, such as UNESCO, which only collects and reports data on international students studying in courses of more than two years’ duration.

An alternative source of data on global student mobility, IIE’s Project Atlas, identified China as the third-most popular destination for international students globally in 2012 by virtue of counting all students, not just students in award courses (IIE, 2013). In 2012, UNESCO identified China as only the eighth most popular destination for international students, by virtue of its narrower definition of an international student. In 2013, only 41 per cent of the more than 350,000 international students studying in China were award students (China Association of Hong Kong, 2014) and it is likely that they are the only students being counted by UNESCO.

To appreciate fully the extent of international student mobility in the twenty-first century, it is important to count as many different forms of mobility as is feasible. This paper has sought to highlight the importance of collecting data on non-award and short-term study experiences, which are both areas of high volume and rapid growth. Currently, Australia collects and publishes data on all incoming students on student visas, regardless of whether they are studying award courses or not and regardless of their course duration. Countries such as the US and China are doing much the same. Such public reporting of student mobility data benefits all nations that are engaged in international education. It highlights the value of international education and enhances participation in it.
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References


Chieffo, L., & Griffiths, L. (2004). Large-Scale Assessment of Student Attitudes after a Short-Term Study Abroad Program. Frontiers: The Interdisciplinary Journal of Study Abroad, 10, 165-177.


