

Monitoring international interest in transnational academic mobility to Australia

A mixed-method approach

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In a recent study, the issue of transnational academic mobility of academic staff, considering moves to higher education institutions in Australia, was examined using a web-based portal that attracted interested parties from around the world with information about Australian academic career opportunities. Web analytics were used as the research mechanism for generating quantitative data that identified the regions of the world from where most interest was being generated. Passive observations were made, leading to commentary on the regions of particular interest, the effectiveness of web analytics as a research tool, and the strengths and limitations of such an experiment. Whilst this study highlighted some interesting trends there were a number of inherent limitations. To build on these findings, and to overcome the original experiment's limitations, an online questionnaire was introduced to extract additional quantitative and qualitative demographic data. In utilising this mixed-method approach, a more detailed profile of those interested in transnational academic mobility to Australia, has been developed. A number of interesting new findings emerged about the characteristics of those looking at academic careers in Australia, and a more detailed depiction of the transnational nature, and multicultural make up, of the academic profession has been realised.

Introduction

Hopkins (2011) developed a mechanism for monitoring interest in transnational academic mobility to Australia that utilised web analytics, the collection, measurement, monitoring, analysing and reporting of web usage data, to identify the geographical locations of visitors to a website providing information about academic careers in Australia (Hasan, Morris, & Probeta, 2009). From a total of almost thirty thousand data points collected over a twelve month

period, the highest level of interest was identified as being from users within Australia (12.7 per cent), followed by UK (8.4 per cent), US.edu (3.2 per cent), New Zealand (3.1 per cent), Canada (2.3 per cent), Germany (1.6 per cent) and France (1.1 per cent); with the site being accessed by users located in 46 different countries overall.

Whilst the research succeeded in collecting a valuable set of data that highlighted the nations where the highest level of web activity was originating, a number of limitations were also identified. The results were restricted

in detail to simply the country that the IP address of the user was located in, so the actual nationality of that user could not be determined, and other details such as gender, age, qualifications and area of career interest were also unknown.

This research now extends beyond the realms of the original experiment to incorporate an online questionnaire that was designed to extract details about the users' age, gender, country of birth, country of residence, current position, highest qualification, fields of academic interest, reason for interest in Australia, and other countries they would consider for an academic career.

Background

Universities, like many modern organisations, operate and compete for business on a global scale; 'Information technology; the knowledge economy; increased mobility for students, faculty, programmes, and providers; and an integrated world economy propel this internationalisation' (Altbach & Knight, 2007, p. 303), making it a topic of great focus and debate. The added dimension brought by educational internationalisation poses new challenges for academic institutions and opportunities for staff, where new factors and considerations must be deliberated (Knight, 2003; Sanderson, 2011).

Students see value in learning about other cultures as part of their university education and believe multicultural communication skills to be very important in a globalising world (Coryell, Durodoye, Wright, Pate & Nguyen, 2010; Walker, Yecies & Freund, 2009). As a result universities are working to increase the international exposure of their institutions to meet with this increasing interest from overseas (Yates, 2002). Similarly, academics regard living and working overseas, and gaining international experience, as an effective mechanism in developing their knowledge and skill sets. This notion of academics moving between territorial boundaries is called 'transnational' academic mobility (Kim, 2009; Kim & Locke, 2010).

Over the last 20 years, the level of transnational movement of academic staff has steadily increased due to a number of factors. The rise of the global market and globalisation as a whole have obviously been a major influence, as well as the affordability and ease of international travel and improved communication methods, but additionally new recruitment policy strategies and the relaxation of trade policies by many national governments have led to greater intake of overseas academics. Changes in immigration policy in countries such as the UK, USA, Canada and Australia favour highly skilled workers and

academics, especially those specialising in areas such as science and technology (Kuptsch & Pang, 2006; Tremblay, 2005).

Mobility in the academic profession is generally presented as something positive and associated with a range of benefits (Edwards, Bexley & Richardson, 2011; Musselin, 2004). It has been suggested that researchers who show a high level of mobility have been exposed to different schools of thought and could therefore be more likely to pursue new and unexplored research topics (Robken, 2007). Similarly 'senior academics, whose qualifications enable them to move laterally, as their interests suited them, articulate experience-based knowledge on a wide range of topics' (Hoffman, 2008, p. 10).

This doesn't only apply to senior academics. The European Charter for Researchers (ECFR) is a set of general principles and requirements which specifies the roles, responsibilities and entitlements of researchers and recognises the value of all forms of mobility as a means for enhancing the professional development of researchers; 'Employers and/or funders must recognise the value of geographical, intersectoral, inter- and trans-disciplinary and virtual mobility... as an important means of enhancing scientific knowledge and professional development at any stage of a researcher's career... they should fully value and acknowledge any mobility experience within their career progression/appraisal system' (ECFR, 2006, p. 20). Indeed, in a recent study involving Australian research students it was discovered that 40 per cent expect to work outside of Australia in the medium- to long-term and that these migration flows of academics, into and out of Australia, are important for the cross-pollination of knowledge within the occupation (Edwards *et al.*, 2011).

Academic mobility is not a new phenomenon, and much research was done on this topic as far back as the 1950s and 1960s (Lazarsfeld & Thielens Jnr, 1958; Marshall, 1964); but advances in technology, and the internet in particular, have made the task of advertising and searching for academic positions overseas all that more accessible and achievable. This paper builds upon the findings of previous research conducted into the issue of the mobility of academic staff to Australia, and observes the geographic mix of academics interested in migrating to the Australian higher education sector.

Higher education in Australia

Australia is a country with rich traditions in immigration. Ever since James Cook became the first European to encounter the eastern coastline of Australia in 1770, with the British Government deciding to establish a colony at

Botany Bay seventeen years later (Baker, 2002), it has continued to attract a steady mix of migrants from around the world; never more so than today.

Australia's population reached an estimated 22.5 million in September 2012 and the Department of Immigration and Citizenship (DIAC) is forecasting a gradual annual rise in net overseas migration to a level of approximately 262 000 by June 2016 (DIAC, 2012). Census data from the Australian Bureau of Statistics (ABS) also show that 26 per cent of Australia's population was born overseas, and a further 20 per cent had at least one overseas-born parent, which is a greater proportion than that of any other recognised migration country (ABS, 2011).

There are 39 universities in Australia (AEN, 2013), most being government owned and largely funded by the Australian Federal Government's Department of Employment, Education and Training (Abbott & Doucouliagos, 2003), and 17 of which are listed in the top 500 of the Shanghai Jiao Tong University (SJTU) Academic Ranking of World Universities 2009 (SRC, 2009). All higher education providers in Australia must be listed on the Australian Qualifications Framework Register of Recognised Education Institutions and Authorised Accreditation Authorities in Australia – this register being developed under the instruction of the Commonwealth, State and Territory Education and Training Ministers (CSHE & CHEMP, 2008).

On average, Australian universities now receive 15 per cent of their annual revenue from international student fees (Sheil, 2010). Indeed, for the tax year 2009-2010 Australia's overall education services exports were estimated at \$19.1 billion, a 10.2 per cent (\$1.8 billion) increase on the previous year (ABS, 2010).

The number of full time, or full time equivalent, members of staff employed at Australian universities has grown by 27 per cent over the last ten years – from 61,192 in 1999 to 77,491 in 2009. The number of senior lecturers (Level C) has grown to 9,159 from 7,673, and lecturers (Level B) from 10,277 to 12,753, over the same period (DEEWR, 2009). At the same time academic mobility out of Australia is also at record levels, although in numerical terms it is more than counterbalanced by the inflow of immigrant academics. In the field of sciences for instance, 'more than 2,000 of the science academics (almost one third) in Australia attained their highest qualification from a higher education institution outside Australia' (Edwards & Smith, 2009, p. 22), with Hugo (2005) predicting that 'Australian universities over the next decade will be faced by their largest recruitment task for three decades. This task will be addressed in a context of the most competitive international labour market for the most skilled aca-

demics, scientists, technologists, and researchers that has ever existed. If Australian universities are to maintain their current levels of excellence, let alone enhance them, a range of innovative human resource strategies will need to be initiated.'

This level of activity and mobility makes Australia a particularly interesting subject upon which to base this study – with such an inflow of immigrant skilled academics, attempting to identify the global regions that are generating the most interest is an important issue for investigation.

The Internet as a research tool

Data collection via the Internet 'is one of the most revolutionary changes in the market research industry in the past 40 years' (Taylor, 1999, p. 52). Its key advantage being its ability to facilitate access to subjects that would be difficult to reach via other mechanisms (Jones, 1999), regardless of geographic constraints, and in real time. Browser-based research is highly flexible and can take many different forms; 'not only can any paper-and-pencil study appear on a browser, but the medium can also provide unique, new opportunities for a researcher' (Stanton & Rogelberg, 2001, p. 201). The Internet has an almost unlimited audience, there is no need to know who your audience is or to invite them, as they will come and find you if you're offering information they are interested in, and there are tools available that will collect data for you automatically; these instruments can be left running, collecting data, unattended. For these reasons, an Internet-based approach was seen as the most effective mechanism for collecting primary data from very large, global, extremely diverse cohort (Hewson, Yule, Laurent & Vogel, 2003; Illingworth, 2012).

One of the emerging trends of the 21st century is the use of the Internet as not just a tool for retrieving information, but also as a resource for self-help and guidance (Amir, Gati & Kleiman, 2008). Evidence exists to suggest that individuals are increasingly turning to the Internet for the task of career exploration: that is, those activities that individuals engage in for the purpose of promoting career development, choice, or adjustment (Boyce & Rainie, 2003; Gore, Bobek & Robbins, 2006; Kommers & Rainie, 2002). It is estimated that approximately four million users do exactly this everyday (Boyce & Rainie, 2003). The Internet now means that the effort, and cost, of searching online for career opportunities are completely independent of the proximity of the job seeker to the actual vacant position. Access to information about vacant positions is just as readily available whether you are located in the

same city or on the other side of the world (Stevenson, 2009; Tso, Yau & Cheung, 2010).

This online career exploration therefore raises the possibility of using the Web to observe and monitor aspects of human behaviour (Goncalves & Ramasco, 2008). The Internet offers more data than ever before on the habits and preferences of customers, and web analytics offer a mechanism for recording and documenting this information (Phippen, Sheppard & Furnell, 2004). Web analytics is the collection, measurement, monitoring, analysing and reporting of web usage data to help better understand visitor experiences (Hasan *et al.*, 2009; Hopkins, 2011), which can be employed in monitoring visits to websites whilst discretely collecting data about those visitors. This has obvious business applications but can be used as a powerful tool for research. Therefore, in order to measure global interest in transnational academic mobility to Australia it was decided that one mechanism would be to establish a web portal and extract web analytics data about the visitors to that site over a twelve month period.

In addition to analytics data it was also decided to link the web portal to an online questionnaire in an attempt to acquire further demographic data about the visitors to the site. In utilising this mixed-method approach

it was hoped that a more detailed profile of those interested in transnational academic mobility to Australia could be developed.

Google Analytics

Google Analytics (GA) is a free web analysis service offered by Google, originating in 2006 as a result of Google's acquisition of the web analytics software firm Urchin, which facilitates the capture of detailed statistics about the visitors to chosen websites.

GA is a user-friendly application that provides time series data about the behaviour of visitors to a website. It can identify how they arrived at a site, whether they were referred to the site via a search engine, a referring site, or are a direct visitor (Plaza, 2009), and whether they are new visitors, return visitors, paid search traffic or non-paid search traffic. The location of the visitors can be broken down into different levels of detail, such as continent, country or city; and GA can be used to track web-enabled phones, mobile websites and mobile apps. It is primarily a tool for measuring the success of a website, marketing

effort, products and services, and is accepted as the industry standard (Ledford, Teixeira, & Tyler, 2009).

Once a GA account has been set up any number of website domains can be tracked via the GA dashboard. After entering the URL of the site you wish to track a section of code is automatically generated which must then be pasted in to the header section of the html source code of the web pages that are to be tracked. Approximately 24 hours after this process has been completed tracking of the analytics of that page begins.

Methods

The aims of this study were two-fold:

1. To triangulate the GA analytics results with those of an online survey to create a richer, more detailed, depiction of transnational interest in academic mobility to Australia
2. To assess the suitability of GA as a data collection tool, in comparison with the method employed in a previous study which was based around raw logs.

This mixed methods approach to research is rapidly growing in popularity and gives researchers the freedom to mix and match different design components, from individual mono-methods,

to increase the potential for answering research questions in a more detailed manner. Described as 'the natural complement to traditional quantitative and qualitative research,' the approach acknowledges the importance of more traditional quantitative and qualitative research but offers an additional 'powerful third paradigm choice that often will provide the most informative, complete, balanced, and useful research results' (Johnson, Onwuegbuzie & Turner, 2007, p. 129). A mixed methods approach allows triangulation, limits weaknesses that may be inherent in any single methodology, and removes the possibility of common method bias (Johnson & Onwuegbuzie, 2004; Tashakkori & Teddlie, 2002). However it does generate more results and, therefore, usually requires lengthier discussion and analysis.

Establishing a web portal

To examine these research themes a web portal, a site that provides users with online information and information-related services (Yang, Cai, Zhou & Zhou, 2005), was established as the survey instrument. The portal had

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to be designed in such a way as to generate significant interest amongst those parties looking for information on academic vacancies in Australia, by offering valuable information on the subject, and structure it in a way that would make it easy for potential users to find.

The website academicjobsaustralia.com was originally developed for this research in November 2008, and was designed to act as a gateway containing links to typical content that users, looking at the possibility of a career in academia in Australia, would be interested in. Such content included a listing of and links to all major universities in the country, direct links to each university's careers/jobs pages, and links to information about the geographical location of their numerous campuses.

This researcher had recently been through the process of looking for, and securing, an academic position in Australia himself, so was able to draw upon twelve months of his own experiences as to what kind of information users would most likely be interested in finding out, in an attempt to maximise the appeal of the site. All the design, development, platform testing, and piloting of the new website was done in-house, and off line, with research students assisting in testing the robustness and accuracy of the site's operation.

The Google search engine was chosen as the main distribution outlet for this study as it is the most used search engine on the web, with an 85 per cent global market share (Netmarketshare, 2012), which indexes billions of web pages, and is accessible to users all over the world via the use of keywords and operators. Within the first three months of the site's launch, due to increasing traffic and interest, the site was also automatically listed on the Yahoo! search engine, reaching a further eight per cent of the global search engine traffic. The same can now also be said for the world's third largest search engine Bing (with a four per cent share of the global market).

At the time of writing, when searching the term 'academic jobs Australia', the site was listed on the first page of results on the Google.com search engine, in second position. It also features in second position on Bing.com, and is in the number one non-sponsored link position on Yahoo.com. As the author has a background in web design there were no external costs associated in developing the website, or marketing it to appear on the first page of results listing on the Google search engine, but there were hosting costs of approximately A\$100 per year.

The GA dashboard, with its ability to accurately identify the location of website visitors, was configured to monitor traffic to this portal in order to establish where the



Academic Jobs in Australia
 Australia's academic reputation is on the rise, officially home to six of the top 50 universities in the world* its credentials for boasting institutes with high standards of teaching and research are in the ascendance. This has led to an influx of academic talent entering Australia, on 457 skilled visa programs, making 'University Lecturer' one of the top 10 most demanded migrant occupations in 2010-11 (www.gettingdownunder.com).

Printed below is a list of links and information that I collated whilst planning my migration, from an academic career in the UK to one in Australia, in 2008. Links will take you directly to the homepages of all major universities in Australia, and to details of any current vacancies they might have, in addition to useful information about the location of their various campuses.

*Source: QS Quacquarelli Symonds

Institution	Homepage	Vacancies Page	Campus Locations
Adelaide University	www.adelaide.edu.au	www.adelaide.edu.au/jobs	Adelaide (SA), Singapore (Asia)
Australian Catholic University	www.acu.edu.au	www.acu.edu.au/careers	Melbourne (VIC), Ballarat (VIC), Brisbane (QLD), Canberra (ACT), Strathfield (NSW), Sydney (NSW)
Australian Maritime College	www.amc.edu.au	www.amc.edu.au/management-and-logistics/career-opportunities	Launceston (TAS)
The Australian National University	www.anu.edu.au/index.php	jobs.anu.edu.au	Canberra (ACT), Coonabarabran (NSW), Darwin (NT), Bowley Point (NSW)
Avondale College	www.avondale.edu.au	www.avondale.edu.au/staff:jobs_at_Avondale	Cooranbong, Sydney (Both NSW)
Batchelor Institute of Indigenous Tertiary Education	www.batchelor.edu.au	www.batchelor.edu.au/people/current-vacancies	Batchelor (NT), Alice Springs (NT)
Bond University	www.bond.edu.au	www.bond.edu.au/employ	Robina (QLD)
Carnegie Mellon Heinz College	www.heinz.cmu.edu/australia	www.heinz.cmu.edu/recruiters	Adelaide (SA)
Central Queensland University	www.cqu.edu.au	www.cqu.edu.au/jobs@cqu	Brisbane (QLD), Bundaberg (QLD), Emerald (QLD), Gladstone (QLD), Gold Coast (QLD), Mackay (QLD), Melbourne (VIC), Noosa (QLD), Rockhampton (QLD), Sydney (NSW)
Charles Darwin University	www.cdu.edu.au	www.cdu.edu.au/ohrs/jobsetcdu.html	Alice Springs, Casuarina, Jabiru, Katherine, Nhulunbuy, Palmerston, Tennant Creek, Yulara (all NT)
Charles Sturt University	www.csu.edu.au	www.csu.edu.au/jobs	Albury-Wodonga, Bathurst, Dubbo, Orange, Wagga Wagga (all NSW)
Curtin University of Technology	www.curtin.edu.au	jobs.curtin.edu.au	Bentley, Geraldton, Kalgoorlie, Margaret

Figure 1: academicjobsaustralia.com web portal

main areas of interest lie for information about academic careers in Australia.

Online Survey

Online survey research is an efficient approach for leveraging the Internet in gaining access to specific cohorts of people, regardless of geographical location or time zones, in a short space of time (Garton, Haythornthwaite & Wellman, 1999). By being able to access these virtual communities researchers have the ability to isolate groups of individuals that share specific interests, attitudes, beliefs, positions or characteristics, despite the fact that they might be living thousands of miles apart (Wright, 2005; Yun & Trumbo, 2000).

The nature in which online surveys are designed also means that they collect data automatically, allowing researchers to simultaneously work on other projects, and don't require additional costs such as stationery, postage, and travel (Llieva, Baron & Healey, 2002; Wright, 2005).

In this instance, a short online questionnaire was developed that consisted of nine questions designed to extract details about users' age, gender, country of birth, country of residence, current position, highest qualification, fields

Table 1: Online questionnaire questions

Question	Answer Options
1. Age	Under 25 25-39 40-54 55+
2. Gender	Male Female
3. Country of Birth	Textbox
4. Country of Residence	Textbox
5. Current Position	PhD Student Research Assistant Postdoctoral Researcher Lecturer Senior Lecturer Associate Professor Professor Other (additional text option)
6. Highest Qualification	PhD Masters Bachelors Other (additional text option)
7. What is your objective in searching for information about academic careers in Australia?	Just looking Interested in short-term employment Interested in long-term employment Interested in long-term employment leading to residency/citizenship
Which specific fields of academia are you most interested in (e.g. Medicine, Computer Science, Engineering etc.)?	Textbox
Are you also interested in academic opportunities in countries other than Australia? If yes, please list:	Textbox

of academia they are interested in, reason they are interested in Australia, and other countries they might consider holding an academic position in. A hyperlink to the questionnaire, hosted by surveymonkey.com, was added to the bottom of the academicjobsaustralia.com portal page.

Results

Google Analytics

The GA dashboard presents an audience overview report that allows visitor data to be broken down by any date range, via the use of a dropdown calendar menu. This



Figure 2: Drop down menu facilitates the selection of specific data date range

Country / Territory	Visits	↓	City	Visits	↓
1. Australia	1,658		1. Sydney	557	
2. United Kingdom	947		2. Melbourne	419	
3. United States	741		3. Brisbane	221	
4. Canada	270		4. London	160	
5. New Zealand	267		5. Singapore	153	
6. India	190		6. Auckland	123	
7. Germany	166		7. Adelaide	94	
8. Singapore	156		8. Perth	94	
9. Greece	129		9. Canberra	90	
10. Ireland	126		10. Athens	83	
11. Japan	120		11. Dublin	79	
12. Netherlands	120		12. Hong Kong	74	
13. Malaysia	101		13. (not set)	64	
14. Italy	90		14. Wellington	56	
15. China	84		15. Kuala Lumpur	47	
16. Hong Kong	74		16. Dubayy	35	
17. South Africa	69		17. Manchester	35	
18. France	61		18. Hobart	34	
19. Iran	52		19. Edinburgh	34	
20. Switzerland	48		20. Glasgow	34	
21. Spain	48		21. London	32	
22. Turkey	48		22. Berlin	32	
23. Portugal	47		23. Toronto	31	
24. United Arab Emirates	46		24. Oxford	31	
25. Sweden	43		25. Christchurch	29	

Figure 3: The geographical distribution of the top 25 unique visitors by country and city

facilitates the easy generation of daily, weekly, monthly or annual reports; or indeed for any specific period required. As the online survey incorporated in this experiment was live from 1 November 2011, until 31 October 2012, this was the time selection taken in order to align with the survey results for that period.

Over that twelve month period there were a total of 10,278 visits to the site, from 6,468 unique visitors, residing in 114 different countries. GA derives these locations by mapping IP addresses to physical geographic positions and, by using a function called Advanced Segments, these results can be adjusted to display only the unique visitors to the site, filtering out return visitors. This study is not concerned with returning visitors so, from this point on, only unique visitors are discussed.

The largest proportion of unique visitors was identified as originating from within Australia itself (25.6 per cent), followed by the UK (14.6 per cent) and the USA (11.5 per cent). The city where most visitors resided was discovered to be Sydney, closely followed by Melbourne, and then Brisbane. The cities that represented the most unique visitors, lying outside the Australasia region, were found to be London (UK), Singapore, and Athens (Greece). GA is also capable of segmenting visitor by their continents and sub-continent, as well as by country and city as they have been here.

GA also captures the preferred language setting that visitors have their web browsers configured to. This measurement can be important in capturing the native language of the user as many countries now have extremely diverse populations speaking different languages and dialects. The visitors accessing the site were found to be using 71 different language browser settings, the vast majority of which (88.2 per cent) were set to a version of English (US/UK English etc.). The second most popular language setting was Chinese-Taiwan (1.4 per cent), followed by French, Japanese, and German.

Although not utilised in this particular experiment GA also captures data relating to the visitor's service provider, browser type, operating system, screen colour/resolution and Flash/Java support, as well as differentiating between direct, referral, search, mobile and tablet traffic. The availability of this data has significant potential to influence future research.

Survey Data

Over the one year experimental period, a total of 111 responses were received. The survey data was recorded automatically, via Survey Monkey, and later extracted into MS Excel to generate the following graphs. Respondents were found to be born in 32 different countries, whilst residing in 28 different countries, the largest percentage being from the 25-39-year-old age range, and there were exactly twice the number of male respondents to female respondents (n=74 vs. n=37), which supports the findings of Jöns (2011) which state that female academics are generally less geographically mobile than their male counterparts. Sixty-three per cent of respondents (n=70) had a PhD whilst 26 per cent (n=29) were currently undertaking one (Figure 4).

After PhD student the next most popular currently held positions were Lecturer, Senior Lecturer and Post Doctoral Researcher. 'Other' miscellaneous positions included educator, sessional teacher, and Dean.

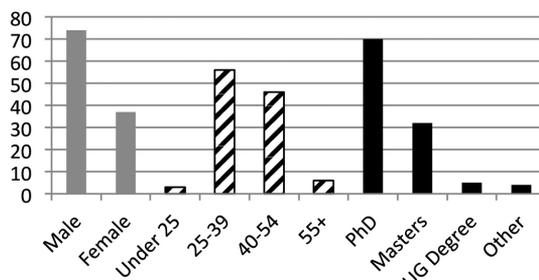


Figure 4: Gender, Age Groups, and Qualification Level

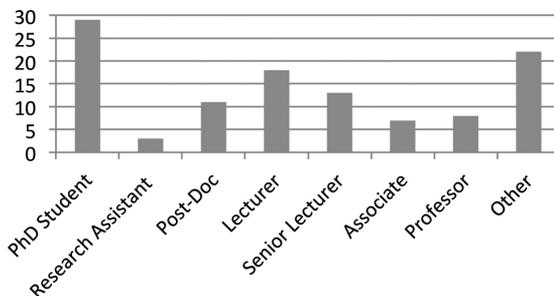


Figure 5: Current Position

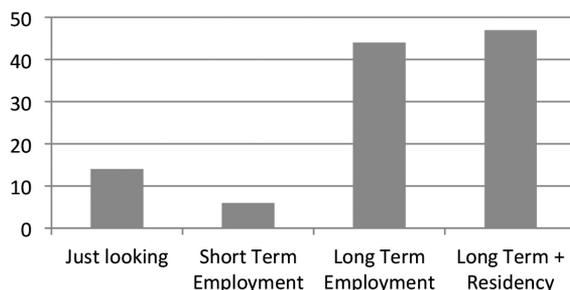


Figure 6: Strength of Interest

These results were closely aligned with the GA data, collected over the same period, identifying those taking part in the survey as residing mainly in Australia, UK, USA, New Zealand and Canada, considering this was such a smaller sample size.

When comparing the country of residence results, with those of country of birth, it can be seen that a much lower number of people were born in Australia compared with those residing there (n=15 vs. n=27). Similarly, with New Zealand only three participants were born there but nine were residing there. This supports what census data says about the percentage of Australians and New Zealanders that were born overseas being greater than that of any other recognised migration countries in the world (NCS, 2006). A similar pattern can also be identified in the results collected for the UK and USA.

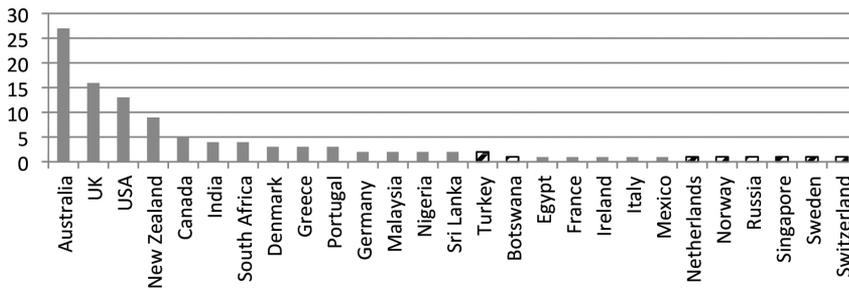


Figure 7: Country of Residence

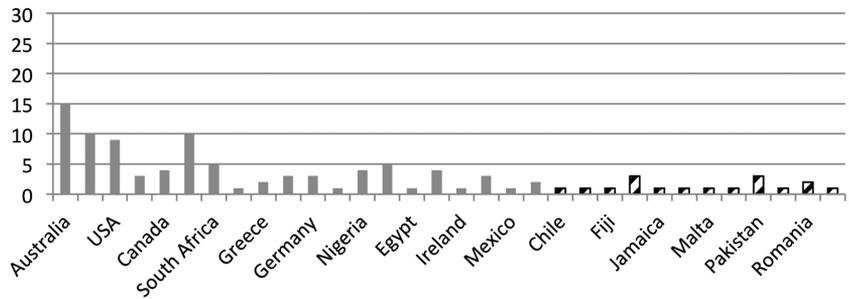


Figure 8: Country of Birth

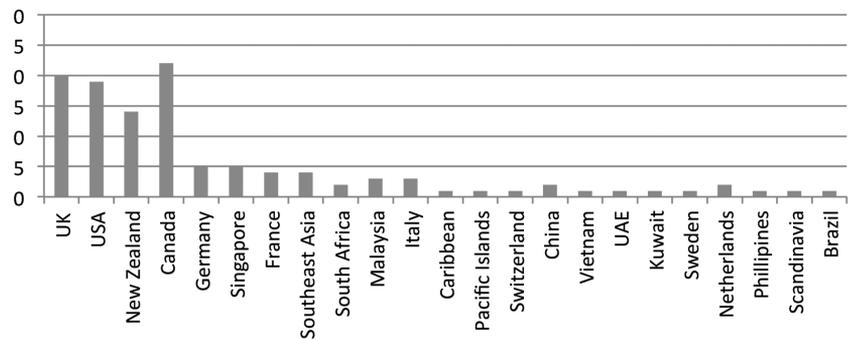


Figure 9: Other countries of interest for transnational mobility

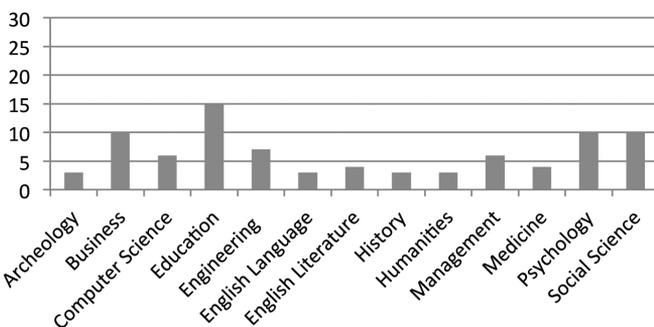


Figure 10: Main academic fields of interest

It can also be seen that a disproportionately high number of people were born in India, compared to the percentage of those identified by GA as residing there; whilst only four people who took part in the online survey were residing in India, 10 people overall were actually born there. If this is a representative sample it can then be projected that a greater number of Indian-born academics (in the region of 500) are accessing the site each year than the GA results would indicate. This would make them the fourth largest cohort after their Australian, US and UK counterparts. There were also participants in the online survey residing in Turkey, Botswana, Netherlands, Norway, Russia, Singapore, Sweden and Switzerland, but nobody taking part in the survey was actually born in those countries (as highlighted in Figure 7). Conversely, nobody residing in Bangladesh, Chile, Cyprus, Fiji, Iran, Jamaica, Malawi, Malta, Mauritius, Pakistan, Poland, Romania or Tanzania accessed the site but, according to the survey results, there were a number of participants born in each of those countries (as highlighted in Figure 8).

Survey respondents expressed an interest in 89 different academic fields in total, and their interests were as diverse as Urban Planning and Criminology to Neurogastroenterology and Anthropology. The highest levels of interest, however, were found to be in the Education (n=15), Business (n=10), Psychology (n=10) and Social Science (n=10) disciplines.

Experimental Limitations

The Internet population has sometimes been regarded as being non-representative, with certain members of the global population, or in spe-

cific countries, not having equal access to the Internet as others. Women, people of limited financial resources, members of some racial and ethnic minorities, people at low education levels, and older age groups may all fall into this category (Zhang, 1999). These factors could limit the accuracy of the results from this study, though to what extent is obviously unknown. However, it can be assumed that, in the global workspace, the use of the Internet would be the primary mechanism in locating information regarding higher education vacancies, especially overseas, so perhaps this is not too significant a limitation.

The web portal established for this experiment is available in English language only, which may have limited its audience although, as Australia is an English speaking country, a high level of English would most likely be expected from applicants looking at academic opportunities in Australia.

Despite there being a large number of Chinese academics working in institutions across Australia, this research has not been able to extract any significant data to identify the level of interest coming from that country. Whilst Google Analytics was able to recognise a number of Chinese visitors to the web portal nobody from China took part in the online survey. This is possibly due to the strict internet access laws in China, meaning that users might not have been able to take part in the SurveyMonkey-hosted online survey.

Conclusions

The mixed method approach adopted by this research combines the strengths of web analytics and online surveys in mapping the current landscape for interest in mobility into Australian academic careers. Google analytics enabled the identification of the geographical location of visitors to the *academicjobsaustralia.com* website, down to city level and over specific date ranges, and detected the users' preferred language options; whilst the addition of an online survey into the experimental method allowed the analytics data to be blended with general demographical information about the visitors' country of birth, highest qualification, current position and specific areas of interest.

On analysing this combination of results it was concluded that those interested in an academic position in Australia are mostly male, highly qualified, between the ages of 25 and 54, living in Australia, USA or UK but possibly born in India, Sri Lanka or South Africa, speaking English, are looking for a long-term academic appointment in the field of education, business, psychology or social

science, and are also interested in transnational academic mobility opportunities to Canada, UK or USA. This is a richer, more detailed, depiction of transnational interest in academic mobility to Australia than was possible with the original experiment.

Compared with the previous instrument that was based around raw logs, the GA version of web analytics was found to offer greater accuracy in the identification of the location of visitor, where the level of detail achievable was only at country level, and was able to resolve an issue regarding the location of '.com' domains that allowed more accurate data on US visitors to be captured. With raw logs numbers can also be grossly overestimated due to the nature in which search bots and automated queries are counted together. The numbers reported by Google Analytics actually underestimate traffic slightly, and the software has very strict rules regarding what should be considered to be a visitor or a page view (Scocco, 2011). This would explain any discrepancies between the number of visits recorded during this and the earlier experiment, and indicates that the GA data is a more accurate reflection of interest in the portal. GA's tracking is regarded as being extremely reliable to the point where it is now widely considered as the industry standard.

Building upon the findings established in the earlier experiment (Hopkins, 2011), this research set out to record a mixture of quantitative and qualitative data about international interest in transnational academic mobility to Australia, to produce original findings that would overcome earlier limitations, encourage further debate, and influence future educational policy making. It was successful in achieving that, through the unique combination of Google Analytics and an online survey, and was able to develop a more detailed depiction of that transnational nature and multicultural make up of the academic profession. In being able to ascertain the users' locations, and knowing some basic demographical information about them, academic recruiters may want to focus their efforts on areas that generate a lot of traffic, knowing there is a confirmed audience in situ. Alternatively, areas currently generating little traffic may be identified as untapped markets.

It is believed that this research makes a significant contribution to the existing body of academic literature, concerning academic migration to Australia, and that the method employed herein has great potential for application in many other fields of future academic research.

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