



CAREERS REGISTRATION RESEARCH PROPOSAL



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ATTACHMENTS:

- Organisation Profiles:
 - 1) Graduate Careers Australia
 - 2) NAGCAS (National Association of Graduate Careers Advisory Services)
 - 3) The Careers Group, University of London
- Careers Registration Practical Guide – University of London
- Cobb, F. 2019, *'There's No Going Back': The Transformation of HE Careers Services Using Big Data*, Journal of the National Institute for Career Education and Counselling, Volume 42, Number 1, April 2019, pp. 18-25(8) available online at <https://doi.org/10.20856/jnicec.4204>
- Gilworth, B. 2017, *Careers Registration and Learning Gain, Legacy Seminar*, retrieved from <https://www.thecareersgroup.co.uk/research/research-projects/careers-registration-learning-gain-project/>
- Australian Career Registration Research Project Considerations

Careers Registration Research Project Proposal

EXECUTIVE SUMMARY

Graduate Careers Australia (GCA) is seeking support from Universities Australia and the Australian Government Departments of Education and Employment to continue its research in the 2020-2022 triennium by promoting and evaluating the uptake of the Careers Registration¹ approach to student career advising in Australian universities. The Careers Registration initiative is a new strategy in Australia to strengthen the university-to-work transition for students. The approach has been adopted in over 100 UK universities since 2017, and UK research is indicating a strong correlation between Careers Registration adoption and improved graduate employment outcomes.

¹ The 'Registration' term is used in the UK and USA but is not a common term in Australian universities – 'registration', in the Australian context, refers to the enrolment and re-enrolment process. The 'registration' term has been retained in this submission to better facilitate international collaboration with the University of London and UK universities.

The proposed research will be conducted over three years led by an experienced Australian research team from GCA and NAGCAS. The team will collaborate with participating Australian universities, and leverage the experience of The Careers Group at the University of London gained in a similar three-year study in the UK 2016-19.

RESEARCH QUESTION: *Can the adoption and appropriate adaptation of the Careers Registration methodology established in the UK, enable Australian Universities and their career services to make and measure progress on graduate employability in an evidence-based fashion, informed by big data?*

To be tested in the Australian context, Careers Registration must first be adopted in a pilot group of institutions enabling data to be gathered, analysed, and evaluated. If proven successful and as Australian universities move towards a performance-based funding model, the study will be a powerful impetus for a national roll-out. The Australian HE system will gain significant advantages

through being a later adopter of a similar methodology that has been developed, evaluated, and fine-tuned, over several years in the UK.

A secondary objective of the research is to foster the rapid adoption of Careers Registration in Australian Universities by shared experience and providing a support network for universities implementing the approach.

STAKEHOLDER BENEFITS: Using the UK study as a guide, this research project will help deliver Careers Registration related benefits to a range of stakeholders:

- **Students** – for all students at recurring points in their time at university, the monitoring of, and access to, career readiness development and improved graduate employment prospects ;
- **Career Advisory Services** – timely information on the career status for all students and the opportunity to tailor intervention programs for students at various stages of career development especially students at risk;
- **University Academic Programs** – access to information on student career interests, perceptions and preparedness;
- **University Executive Management** – institutional student career-readiness performance indicators and metrics for senior university management; and
- **Government** – pre-graduation data to complement national QILT graduate outcomes and student experience data.

CAREERS REGISTRATION: By 2019, more than 100 universities in the UK and Ireland had implemented an approach to student careers advising known as Careers Registration. Several Australian universities are launching pilot Careers Registration programs in 2020 based on the UK model.

Careers Registration, seamlessly integrated into the university enrolment processes, is a new tool for monitoring student careers development and employment readiness on an individual basis commencing from the student's first year at university through to graduation. The system is an important data source for career service performance monitoring as an evidence-based approach to graduate employability and career readiness.

The Careers Registration approach provides employment readiness data for graduates and complements graduate outcomes survey data. Students are asked two or three simple questions regarding their career readiness at every enrolment point throughout their time at university. Because all new enrolling and re-enrolling students answer the questions, the university is able to use Careers Registration data to build a university-wide student career-readiness profile. The profile can be analysed using several variables (by year, academic program, study mode, region, etc.). The data can trigger interventions for students at risk, inform advising strategies, and provide university career advisory performance measures.

RESEARCH DESIGN and METHODOLOGY: This Australian study will closely replicate the UK research methodology and form the basis for a three-year monitoring and comparative study for the uptake of Careers Registration in Australia. During 2020-2022, the study will gather data and shared experiences from universities in the UK and Australia as Careers Registration approaches are adopted and implemented in a growing number of universities. The project will be jointly led by Dr Noel Edge, GCA Executive Director, Dr Julie Howell, NAGCAS immediate past-President and Acting Director Student Experience, Curtin University, and Dr Bob Gilworth, Director, The Careers Group, University of London.

The project will involve a project establishment phase where the Australian research team will collaborate with participating universities on de-identified data sharing and data collection processes. Annually, the Australian and UK research team will analyse results and review progress with repeated interviews with each of the participating Australian and UK universities, as well as data collection and processing from university enrolments. Reporting will take place at the annual Careers Registration Forums in London and Australia, with a final project report for publication in December 2022. The project will also provide a national network for participating universities to share experiences and support their implementation of Careers Registration. The project will also include options for universities to separately engage a specialist Careers Registration consultant from the UK Careers Group. Project funding will be subject to annual

audit and acquittal through GCA's established corporate governance and compliance processes.

The project budget is **\$577,500** (excl GST)² over three years funded by equal grants of **\$192,500** (excl GST) x3² sought from:

- Universities Australia;
- Department of Education; and
- Department of Employment, Skills, Small and Family Business.

Budget Item	2020	2021	2022	TOTAL
Project Establishment	\$30,000	-	-	\$30,000
International Travel (UK/AUS)	\$32,500	\$32,500	\$32,500	\$97,500
Local Travel (AUS)	\$20,000	\$20,000	\$20,000	\$60,000
University Networking Forums	\$15,000	\$15,000	\$15,000	\$45,000
Research Assistance (AUS)	\$75,000	\$75,000	\$75,000	\$225,000
Research Assistance (UK)	\$30,000	\$30,000	\$30,000	\$90,000
Final Report	-	-	\$7,500	\$7,500
Administration/Compliance	\$7,500	\$7,500	\$7,500	\$22,500
TOTAL (excl GST)	\$210,000	\$180,000	\$187,500	\$577,500²
TOTAL (incl GST)	\$231,000	\$198,000	\$206,250	\$635,250

² \$192,500 (excl GST) x3

1. PROJECT OVERVIEW

As part of GCA's 2017-2019 Graduate Research Program, GCA funded a small project to investigate and monitor best practice developments in **graduate employability** initiatives in North America and the United Kingdom.

Graduate Employability? *The capability to make well-informed, realistic plans for the future and to be able to execute these in a changing world (Gilworth, 2017)*

A significant initiative in graduate employability, monitored by GCA and NAGCAS since 2017, was the rapid adoption of the Careers Registration approach in the UK. The method was introduced in 2012 and facilitated by The Careers Group at the University of London. In 2018 Dr Bob Gilworth, Director of The Careers Group, presented Careers Registration to the NAGCAS Conference.

In May 2019 GCA represented Australian universities at the Careers Registration Forum in London. Delegates at the forum shared graduate outcome successes and experiences with Careers Registration. A highlight of the forum was the presentation of research findings from a three-year research project conducted by The Careers Group with funding from the UK Government into the Careers Registration experience for a core group of UK universities. The research project set out to investigate Careers Registration as a measure of learning gain in work readiness. A key finding of the research was a high correlation between the implementation of Careers Registration and graduate employment outcomes.

This research project proposal seeks funding support, in equal measure, from Universities Australia, the Department of Education, and the Department of Employment to replicate, as closely as possible, the three-year research project conducted in the UK. GCA will administer the study and the research led by GCA, NAGCAS, and the UK Careers Group, University of London. The study will seek to evaluate the experience of universities as early adopters of Careers Registration. It will develop an experience base to promote and aid all Australian universities in implementing Careers Registration as an important graduate employability initiative in the Australian Higher Education sector.

1.1 UK Careers Registration Experience

The UK experience with Careers Registration has been overwhelmingly positive. In addition to improved graduate employment outcomes as a result of a better level of work readiness for graduates, Careers Registration 'big data' contributes an evidence-base for university executive management and government graduate outcome surveys.

Careers Registration is a "game-changer" in the UK. Because Careers Registration gathers 'live' data on student's career thinking on entry to university and at each re-enrolment point during their time at university, the 'big data' makes a valuable contribution to a range of factors. In addition to engaging all students in career planning and development, Careers Registration is revolutionising discussions between careers advisors and academics. It is also a useful addition to the retrospective data collected in national post-graduation surveys.

Key issues in the UK arising from the introduction of Careers Registration reported by UK universities include:

- Graduate employability for all – making a difference to career success;
- 'Big Data' - leading indicators of students' sector and geographical preferences; and
- Equity - ensuring that employability resources are targeted to where they are most needed.

Graduate employability for all – making a difference to careers success.

The UK experience shows that understanding students' starting points and career thinking journeys is key to "moving the dial" on those aspects, notably advanced career thinking, which makes a difference to career success. At present, Australian universities have no systematic way of gathering and interpreting such data, as was the case in the UK before the instigation of Careers Registration. This approach has significant potential in both educational and labour market terms. The method enables smart engagement with students based on their stage of career thinking, as distinct from blanket offers based on

less personalised categories such as degree subject or year of study. The personal career thinking journey translates the acquisition of employability assets (knowledge, skills, experiences) into meaningful outcomes for graduates and their employers. In turn this helps to validate the employability value of the higher education experience for the individual and helps the sector to produce more graduates with "well-informed plans for the future and the capability to execute these in a changing world". Informed choice equals better labour market fit and clearer motivation for organisation and role, thereby potentially improving employee motivation, retention and productivity, so reflecting the notion of career education and guidance as a "market maker."

‘Big Data’ - leading indicators of students' sector and geographical preferences. The inclusion of both career sector preferences and work location preferences for work after graduation in Careers Registration data produces a valuable leading indicator data for the "supply-side" of the graduate talent equation. Combining these two factors provides data of great interest and value to professional and government bodies as well as individual organisations with interest in the graduate talent component of economic development at local, regional, state and national levels.

Equity - ensuring that employability resources are targeted to where they are most needed. In the UK, Careers Registration has been a potent tool in understanding levels of engagement with employability enhancing activity and career planning, mapped against student characteristics. Universities are better able to plan to ensure that "widening participation" is about "getting on" - through and beyond Higher Education, not merely "getting in" to higher education as an end in itself, for disadvantaged groups. Careers Registration has enabled UK universities to better target scarce institutional careers and employability resources to where they will make the most difference. There is every reason to assume that the same could be true in Australia.

The overall UK experience with Careers Registration would seem to be equally applicable to the Australian university context. The proposed research project is aimed squarely at addressing this question.

1.2 Research Question

The proposed research in the Australian context will explore a similar research question to the focal research question in the UK Careers Registration study. The Higher Education Funding Council for England (HEFCE) provided funding to The Careers Group and participating universities to research a core question:

Can Careers Registration be used as a viable single measure of learning gain in graduate work readiness across the UK Higher Education sector?

A similar research question has been constructed for the Australian Careers Registration research project:

Can the adoption and appropriate adaptation of the Careers Registration methodology established in the UK, enable Australian Universities and their career services to make and measure progress on graduate employability in an evidence-based fashion, informed by big data?

Given the now extensive evidence in the UK, it is likely that this is a reasonable hypothesis.

To test this hypothesis in the Australian context, Careers Registration must first be adopted in a pilot group of institutions to enable data to be gathered and analysed, and the resulting actions evaluated. The challenge for the Australian research project is to identify and engage a significant number of participating Australian universities to collaborate with GCA and NAGCAS in this study. Unlike the situation in the UK, the Australian research will first need to establish a core group of universities currently planning to implement Careers Registration pilots and develop the necessary data-sharing agreements and ethical clearances. It is envisaged that a core group of six or seven universities will implement pilot programs in 2020, providing full data sets for cross-sectional and eventually longitudinal analysis.

Proving these hypotheses could be a powerful impetus for a national roll-out in the Australian Higher Education sector, delivering significant advantages through being a later adopter of a methodology fine-tuned over several years in the UK.

1.3 Key Stakeholder Benefits

Careers Registration will deliver benefits for a range of Higher Education sector stakeholders:

- Students;
- Career Advisory Services;
- University Academic Programs;
- University Executive Management; and
- Government.

1.3.1 Students - Careers Registration provides all students of an institution with an effortless, naturally occurring way of connecting with Career Services. It is a non-threatening way of sharing their career thinking, interests and level of experience with the University. From there, the University can support them from whatever starting point they have for first-year students, or whatever point they have reached in subsequent years. Crucially, Careers Registration provides that initial contact for students who might not naturally seek out careers and employability support, even though they may be in the greatest need.

Experience in the UK shows that the very act of asking the question raises engagement. Automated responses which provide calls-to-action and access to resources which are relevant to the students' stages of career thinking can enhance this engagement further. Careers Registration enables a degree of personalisation around support for careers, which would be otherwise impossible for all but the most engaged students in a mass higher education system.

1.3.2 University Career Services – In addition to providing support to all students, Careers Registration data contributes to the professional development of university career services. The data offers an internal performance measure that can drive improved and tailored support programs for students, academics and employers, as well as being a platform for staff professional development. With these institutional performance indicators and support delivery metrics, career services management can build evidence-based resourcing and other submissions both internally within the university and with external organisations.

1.3.3 University Academic Programs – Careers Registration data, defining student career preferences and perceptions is a valuable tool for the university academic programs. Career services can partner with academic departments to provide key employment information on careers of interest to the students.

1.3.4 University Executive Management – Careers Registration data has an important role to play in the graduate employment-based performance funding from the government. The approach can strengthen the university's graduate outcomes and can provide an alternate evidence base for presenting the university's funding argument. Like career services internally, Careers Registration data becomes a performance management tool for university executive management in reviewing and managing university career services.

1.3.5 Government - The Careers Registration institutional data, collated and summarised at a national level, may provide a standardised career-readiness leaning measure across the sector. This pre-graduation data can complement the national graduate survey data to provide an analysis of career advising and its impact on GOS graduate outcomes. Similarly, the Careers Registration data at a national level may give useful insights to the student experience (SES) data in all areas of interest, but especially in the areas of student support and skills development. The Careers Registration data also has the potential to complement government research in areas of future work skills and the education-to-work transition for students.

2. CAREERS REGISTRATION

The Careers Registration methodology was introduced at Leeds University in 2012. The uptake of the method in UK universities has now grown to over 100 institutions in the UK and Ireland. It has become a real “game-changer” in the UK. Careers Registration is a clear example of how ‘big data’ (large scale, linkable and longitudinal trackable data) can inform decision making, and support evidence-based practice in higher education and graduate employment. By collecting just a small amount of information on every student at university at numerous enrolment/re-enrolment points, universities can better understand and support student career development needs.

2.1 Careers Registration Approach

Careers Registration involves the inclusion of three (3) employability-focused questions into the student enrolment (registration) process for all new and re-enrolling students ensuring the data is current, connected, comprehensive, and consistent.

It captures annual data on individual student’s perceived state of career readiness which can then be categorised into developmental stages such as Decide/Plan/Complete/Sorted, Explore/Build/Action/Sorted or other institution-specific stage terminology. This data is used to engage students with available career management support and informs career service delivery across the university.

The nature of the data allows for comparable information through both cross-sectional and longitudinal analysis. Significantly it means the development and implementation of interventions to improve retention and employability outcomes are informed by real-time data.

2.2 Career Readiness Questions

Typically three questions are asked at enrolment and re-enrolment. Australian universities implementing Career Registration will often adopt the first two questions used by most universities in the UK. In the UK the third question is more focused on the individual institution and this is expected to be the case in

Australia. However, there is also Australian discussion regarding the value of establishing similarities across Higher Education for the third question.

The first question (see Table 1 below) asks students to self-assess their readiness to engage with career management. The question the statements are placed into four (4) broad categories such as Explore, Build, Action, and Sorted. The aim is to move as many students as possible into the Sorted category as possible by the time of their graduation. The students do not see the categories at the time of answering the questions. Some universities in the UK have however amended their service and program delivery to reflect the categories, making the link to action very transparent.

The second question (see Table 2 below) asks students to provide information on their work history. While a more sophisticated discussion would provide more nuances around the benefits of work experience, put simply a continuum of work experience and/or placements undertaken by students prior to graduation can be mapped to the attainment of graduate employment, underemployment and unemployment. The more related work experience the more the chance of the student attaining employment success with the flip side being - "no work experience, no graduate job". Work experience is also a key contributor to commercial awareness, which is closely linked to career motivation and ultimately retention. The reality is that although many Universities can ascertain participation in WIL, this data is currently incomplete and often only part of the students overall work history. Without Careers Registration, most universities will know very little about students' full work experience history.

In the UK the third question has been less generic across the participating universities and more dependent on the focus/priority of the individual university. The third question usually falls into one of three broad themes:

- Graduate employment location preference;
- Industry sector preferences (students choose 3); or
- Enterprise (students choose one statement).

2.3 Using Careers Registration Data

Some examples of how Career Registrations Data can be used are presented in Figures 1 (a)- (d) below.

Table 1 – Question 1: Self-Assessment Career Readiness

Decide:
1. I am not ready to start thinking about my preferred career
2. It is too early for me to start thinking about my preferred career
3. I haven't thought about my preferred career but I know I need to
4. I thought I knew what I wanted to do but now I'm not so sure
Plan:
5. I have some ideas about my preferred career but want to find out more
6. I have ideas about my preferred career but am unsure how to begin working towards my goals
7. I have ideas about my preferred career and have started working towards my goals
8. I have ideas about my preferred career and know I am on track to achieve my goals
Complete:
9. I would like to begin applying for employment in my preferred career
10. I am currently applying for employment in my preferred career
11. I am planning to start my own business related to my preferred career
12. I am planning to undertake further study
Sorted:
13. I have secured employment in my preferred career
14. I have started my own business related to my preferred career
15. I have secured a place in further study
16. I am pursuing my current course out of personal interest

Table 2 – Question 2: Work Experience History

Decide:
1. I have no work experience to date
Plan:
2. Voluntary work with a club, society, organisation and/or community
3. A position of responsibility within a club, society, organisation and/or community
4. Participation in unpaid work shadowing or work experience
Complete:
5. Participation in a work placement, fieldwork or practicum for course credit
6. Participation in a structured internship or vacation program
7. International work and/or study experience
8. Employment unrelated to my preferred career while studying, including part-time/casual work, full-time or self-employment
Sorted:
9. Employment directly related to my preferred career while studying, including part-time, casual work
10. Up to 12 months employment directly related to my preferred career prior to my course commencing
11. More than 12 months employment directly related to my preferred career prior to my course commencing
12. Self-employed/operating my own business related to my preferred career

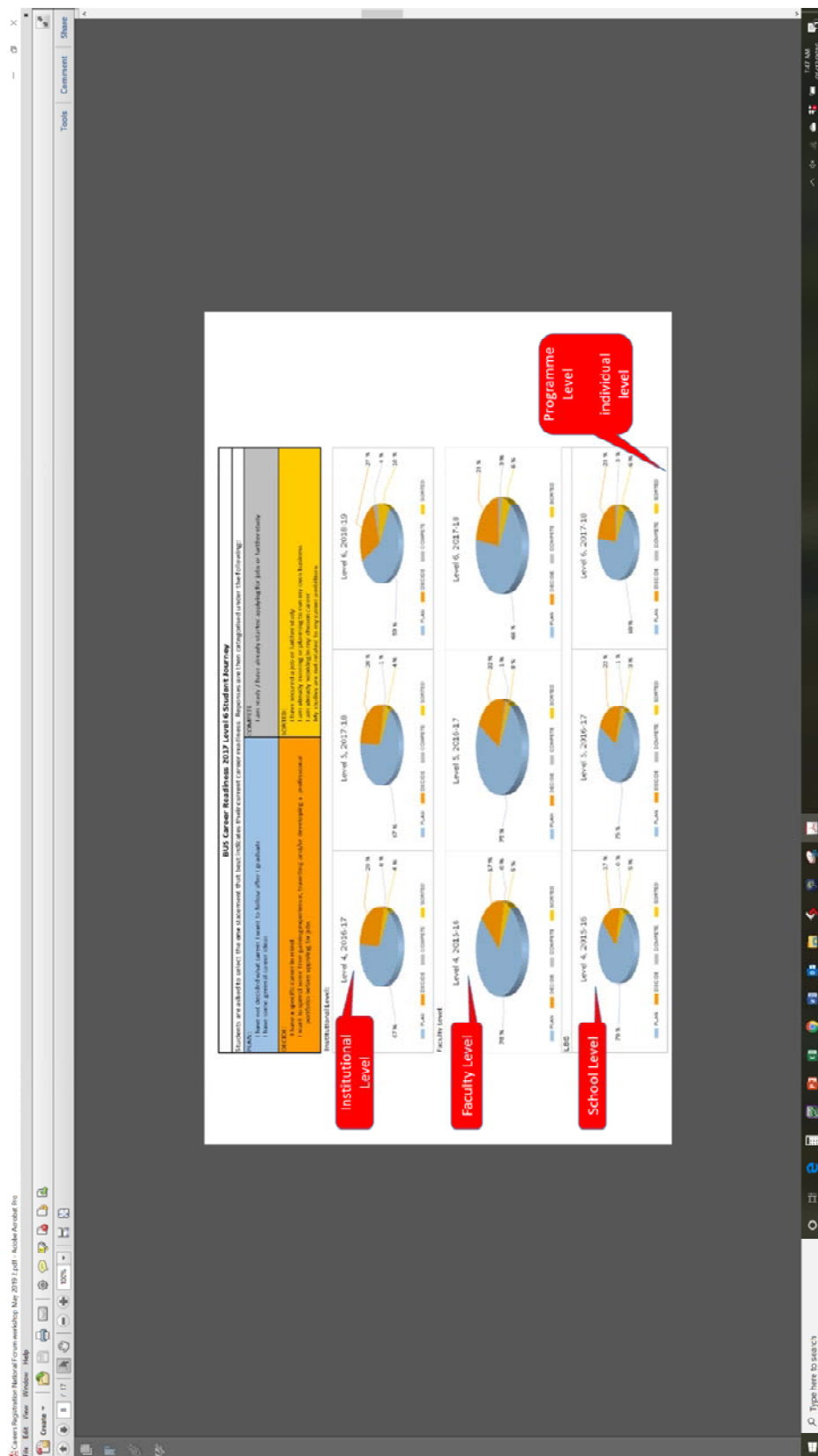


Figure 1a – Career Registration Data



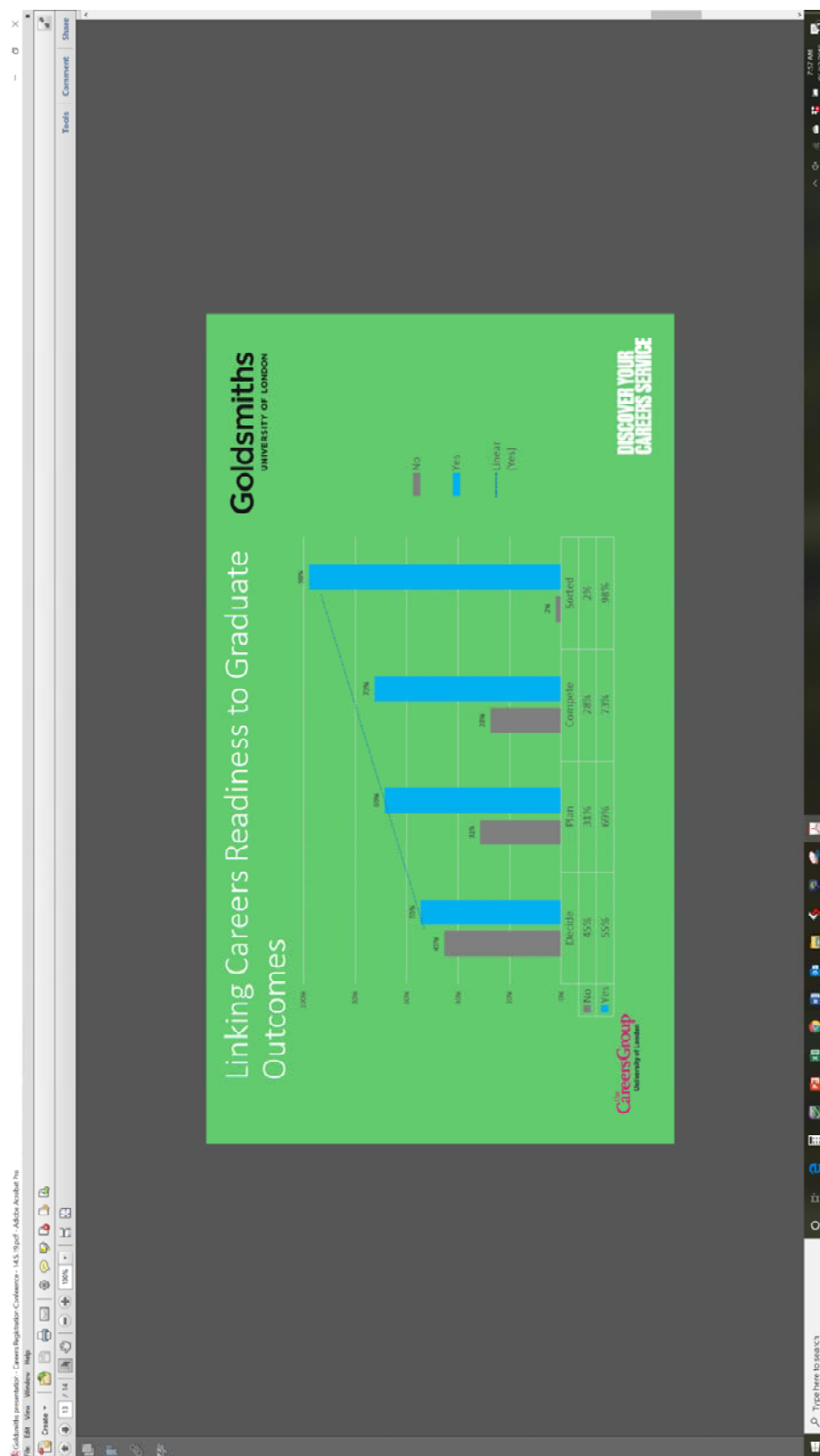


Figure 1c – Career Registration Data (cont'd)



Figure 1d – Career Registration Data (cont'd)

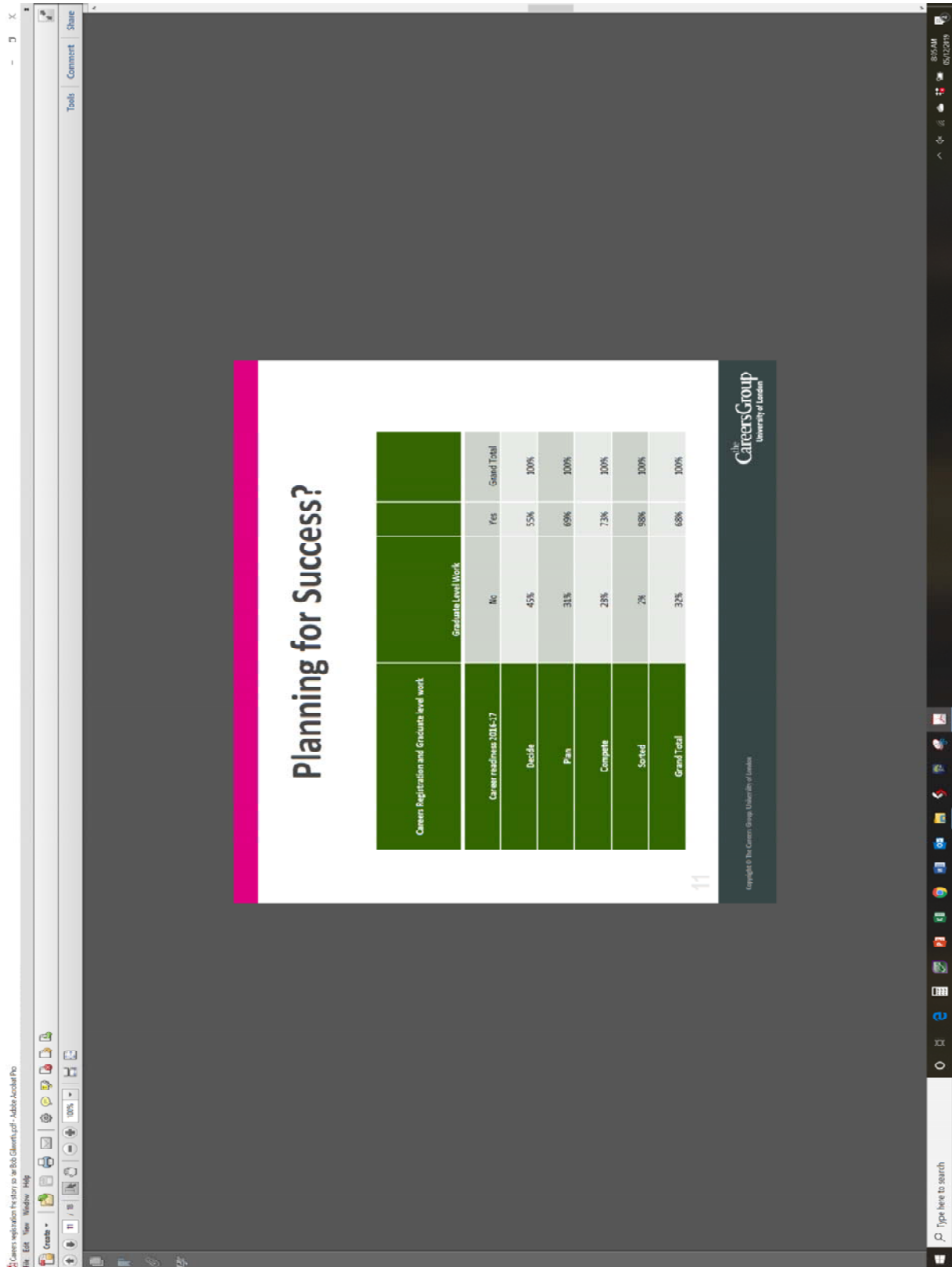


Figure 1e – Career Registration Data (cont'd)

3. UK RESEARCH PROJECT

The UK Careers Registration research project (see Figure 2 summary) on which this research project proposal is based, was launched in 2016. The project was called the *Careers Registration and Learning Gain Project*. The Careers Group led the project at the University of London with 15 participating universities where Careers Registration had been implemented.

3.1 Objectives

The primary objective of the project was to explore Career Registration as a single viable measure of work readiness in the UK Higher Education sector. Specifically, the project investigated if Careers Registration can be used to:

- track gains in graduate career readiness and employability;
- predict employment outcomes for graduates;
- investigate the engagement of students in employability activities;
- evaluate employability strategies;
- investigate practical issues implementation; and
- understand how the data could inform institutional strategies.

3.2 Findings

Over three years the study gathered data from almost 120,000 student enrolments and re-enrolments to allow multinomial modelling of career readiness and academic program and socio-demographic characteristics. The findings of the study found a significant correlation between career readiness and graduate outcomes and tracked year-by-year career thinking by a range of variables (see Figure 3 for an example).

The project has demonstrated that career readiness data is a critical factor in driving strategic decision-making at academic program, institutional, regional and sector levels.

A key recommendation from the UK study was the establishment of an annual national large scale and linkable data set to the national graduate outcomes data.

Careers Registration and Learning Gain

A 3-year HEFCE funded pilot project to investigate the use of Careers Registration as a measure of learning gain in relation to work readiness.

Led by the Careers Group, University of London

Research Project Information

Careers Registration (CR)

What is it?

2–4 careers focused questions added to compulsory student registration and re-enrolment to track progress in career thinking and employability

What are the core questions?

1. Student's self-reported "career decidedness / readiness" (Decide > Plan > Compete)
2. Useful experience gained (e.g. placements, volunteering and internships)

Tracking all students, not just those who are already engaged.

HEFCE Funded Pilot Project

A 3-year HEFCE funded pilot project to investigate the use of CR as a measure of learning gain in relation to work readiness.

Who is involved?

A consortium of 15 institutions who have implemented or will be implementing CR

What will we look at?

- Typical progression patterns for various cohorts (discipline, WP, etc.)
- Predictive power for DLHE outcomes
- Correlations to other employability measures
- Relation to other metrics (NSS, retention, etc.)
- Implementation issues

Potential uses of CR

- ✓ Additional evidence for TEF assessments submissions
- ✓ Providing real data on students' career thinking and preparedness
- ✓ Inform strategic service planning and departmental engagement
- ✓ Identification of 'at risk' groups
- ✓ Identifying specific employability needs of groups leading to targeted marketing and interventions
- ✓ Measuring the effectiveness of employability initiatives
- ✓ Assessing the impact of departmental and student engagement in employability
- ✓ Use with individual students in careers sessions and tutorials
- ✓ Raise student awareness of careers support options

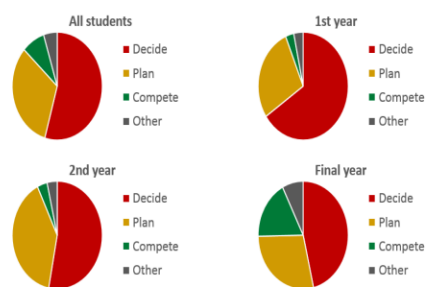
Research Questions

Primary Question

Does Careers Registration provide a viable method for obtaining data that provides an indication of learning gain related to work readiness?
Correlating CR data with existing measures of work related learning gain

Secondary Questions

What is the best way to implement CR?
Can we use CR to highlight employability needs of different groups?
Can we use CR to evaluate different employability activities?



CR enables progress tracking from institutional to individual student level

Partner Institutions

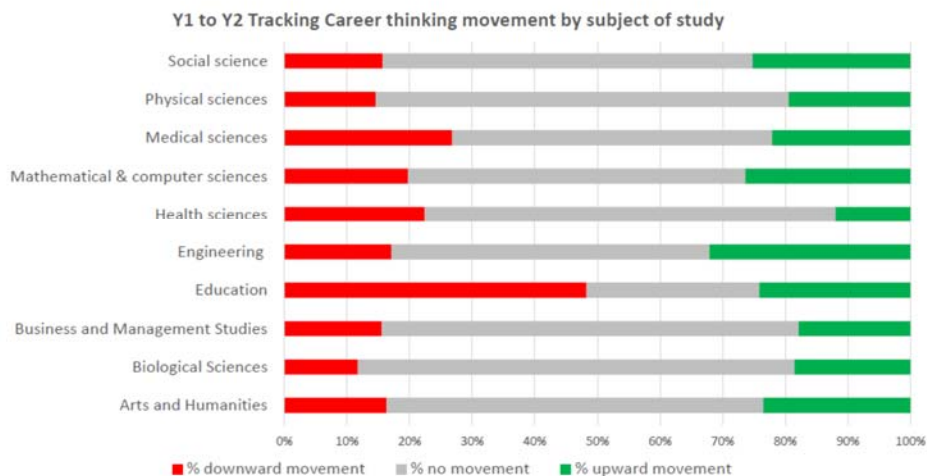
- City, University of London
- Goldsmiths, University of London
- King's College London
- Lancaster University
- Liverpool John Moores University
- Queen Mary, University of London
- Royal Veterinary College
- School of Oriental and African Studies
- St George's University of London
- St Mary's University
- University of Bristol
- University of Exeter
- University College London
- Ulster University
- University of Edinburgh

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the
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University of London

Figure 2 – Career Registration and Learning Gain Project

Career thinking movement

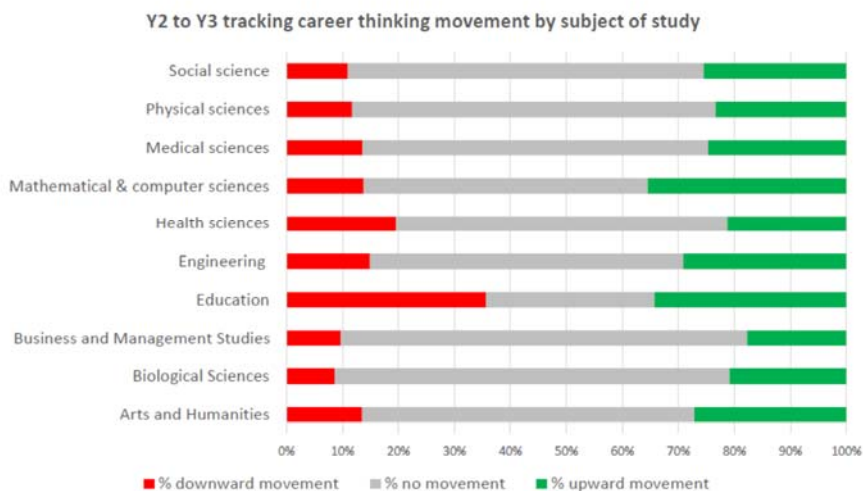


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Career thinking movement



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Figure 3 – Career Registration – Career thinking movement

4. PROPOSED RESEARCH PROJECT

4.1 Objectives

4.1.1 Graduate Employability – The primary objective of the proposed research project is to investigate the use of Careers Registration as a measure of learning gain linked to graduate employability and work readiness. Specifically, the project will...

- Analyse cross-sectional and possibly partial (one three-year cohort may be possible in the three-year timeframe of this project) longitudinal Careers Registration data;
- Explore the use of Career Registration data to complement QILT findings (graduate outcomes, student experience,...) to address university performance funding needs;
- Evaluate the effectiveness of Careers Registration data collection and data quality;
- Examine the usefulness of Careers Registration data for informing student engagement, needs of specific student groups, and collaboration with academic departments, professional bodies and employers;
- Evaluate the effectiveness of Careers Registration data collection as a performance measure of professional career services practice;
- Make recommendations for the implementation of Careers Registration in institutions as a standardised methodology with an emphasis on a national scale.

4.1.2 Careers Registration Adoption – A secondary objective of the project will be to provide direct support with rapid implementation of Careers Registration for universities participating in the study. Without a solid core of institutions implementing Careers Registration in a short timeframe, some of the primary objectives and findings of the project may be at risk or of limited value. This project represents an excellent opportunity for Australian universities to leverage the experience of UK leaders with implementing Careers Registration.

4.2 Research Design and Methodology

Scope: The proposed research project will be limited, in the initial phase, to a core group of participating universities. All universities involved in the project will be required to obtain ethics clearances and be a party to a common data-sharing agreement. Once the project has stabilised in terms of research data collection and analysis, invitations will be to all universities intending to implement Careers Registration. The annual Careers Registration Forum in Australia will be open to all universities regardless of their progress towards implementing Careers Registration. The research will capture student career thinking (stage and experience) enrolment data for pre-processing by each university to de-identified data and then will be passed to the research team for collating and multinomial analysis. Research findings will be reported at each of the Careers Registration Forums in Australia (Nov) and London (May).

Project Administration: The project will be administered by GCA under the supervision of the GCA Board. Dr Noel Edge, GCA Executive Director will manage and administer the project. Dr Edge has extensive experience in administering research programs in Australia and overseas and has led the administration and project management of several large projects for the University of Queensland in the Asia/Pacific, in China for Southbank Institute, and several major government projects for the UAE Government. The project funding will be subject to annual audit by GCA's consultant CPA accountant. The accountant will be engaged to prepare a final funding acquittal report in December 2022.

Research Leadership: The research will be jointly led by experienced researchers from Australia and the UK. Dr Julie Howell, Acting Director of Student Experience at Curtin University and immediate past-president of NAGCAS will oversee the research operations in Australia. Dr Howell has been the lead figure in the development of Careers Registration development in Australia to-date and is in close contact with all universities currently evaluating the approach. Dr Bob Gilworth, Director, The Careers Group, University of London, led the research project in the UK and will act as an advisor on the Australian project. The research team will be assisted by experienced research assistants in Australian and the UK including staff in the UK that conducted the UK research project.

4.3 Project Timeline

2020	Jan	For each participating university: Data Sharing Agreement Ethics Clearance Careers Registration pilot planning/progress reporting Data collection and analysis workshop
	Feb	
	Mar	
	Apr	
	May	Careers Registration (London) – research team delegates Fine tune research design and methodology
	Jun	Research team meeting #1
	Jul	Careers Registration data collection round #1
	Aug	Round #1 data analysis
	Sep	Workshop #1 – participating universities
	Oct	Research team meeting #2
	Nov	Careers Registration (Australia) Forum (all universities) ¹
	Dec	Workshop #2 – participating universities
2021	Jan	Careers Registration data collection round #2
	Feb	Round #2 data analysis
	Mar	Workshop #3 – participating universities
	Apr	Research team meeting #31
	May	Careers Registration (London) – research team delegates
	Jun	Workshop #4 – participating universities
	Jul	Careers Registration data collection round #3
	Aug	Round #3 data analysis
	Sep	Workshop #5 – participating universities
	Oct	Research team meeting #4
	Nov	Careers Registration (Australia) Form (all universities) ¹
	Dec	Workshop #6 – participating universities
2022	Jan	Careers Registration data collection round #4
	Feb	Round #4 data analysis
	Mar	Workshop #7 – participating universities
	Apr	Research team meeting #5
	May	Careers Registration (London) – research team delegates
	Jun	Workshop #8 – participating universities
	Jul	Careers Registration data collection round #5
	Aug	Round #5 data analysis
	Sep	Workshop #9 – participating universities
	Oct	Research team meeting #6
	Nov	Careers Registration (Australia) Forum (all universities) ¹
	Dec	Final research report

¹ Opportunity for individual university Careers Registration mentoring by visiting UK personnel

4.4 Project Budget – The project budget (see below) is **\$577,500** (excl GST)² over three years funded by equal grants of **\$192,500** (excl GST) **x3**² sought from:

- Universities Australia;
- Department of Education; and
- Department of Employment, Skills, Small and Family Business.

Jan-Jun 2020 - Establishment Phase: The project budget will involve a project establishment phase where the Australian research team will collaborate with participating universities on de-identified data sharing and data collection processes. The participating universities will develop a joint data-sharing agreement and arrange ethical clearances in line with each university policy. This phase will also entail detailed negotiations with each university and the AUS/UK project team in defining data collection, sharing and analysis methodologies.

2020-2022 - Data Analysis and Reporting Phases: Annually, the Australian and UK research team will analyse results and review progress with repeated interviews with each of the participating Australian and UK universities, as well as data collection and processing from university enrolments. Reporting will take place at the annual Careers Registration Forums in London and Australia. An annual progress report will be prepared for each funding body.

2020, 2021, 2022 - Networking/Mentoring Phases: The project will also provide a national network for participating universities to share experiences and support their implementation of Careers Registration. Options (not budgeted for) will be made available for universities to separately leverage specialist Careers registration consultants from the UK Careers Group.

Dec 2022 Final Report: A draft final project report to be prepared in December 2022 and distributed to each funding body for review. Once approved by each funding body, a final report will be published and distributed widely to the Australian Higher Education sector.

2020-2022 Administration: Project funding will be administered by GCA and be subject to annual audit and acquittal through GCA's established corporate governance and compliance processes.

Budget Item	2020	2021	Budget (excl GST) 2022	TOTAL
Project Establishment				
Workshops (x3) - participating universities	\$ 15,000		\$	\$ 15,000
Detailed research design & methodology (AUS/UK teams)	\$ 15,000		\$	\$ 15,000
	\$ 30,000		\$	\$ 30,000
International Travel/Accommodation				
Careers Registration Forum - London (x 2 delegates)	\$ 15,000	\$ 15,000	\$ 15,000	\$ 45,000
Careers Registration Forum - Australia (x 2 delegates)	\$ 15,000	\$ 15,000	\$ 15,000	\$ 45,000
Australian Forum catering cost etc	\$ 2,500	\$ 2,500	\$ 2,500	\$ 7,500
	\$ 32,500	\$ 32,500	\$ 32,500	\$ 97,500
Local Travel/Accommodation				
Project meetings (x2/yr)	\$ 5,000	\$ 5,000	\$ 5,000	\$ 15,000
University visits (x2/yr/participating university)	\$ 15,000	\$ 15,000	\$ 15,000	\$ 45,000
	\$ 20,000	\$ 20,000	\$ 20,000	\$ 60,000
Networking Workshops/Forums				
Participating universities - workshops (x4/yr/participating university)	\$ 10,000	\$ 10,000	\$ 10,000	\$ 30,000
All universities information forum (catering)	\$ 5,000	\$ 5,000	\$ 5,000	\$ 15,000
	\$ 15,000	\$ 15,000	\$ 15,000	\$ 45,000
Research Assistants (AUS)				
Part-time research assistant (\$600/day @ 10 days/mth x 12mths)	\$ 72,000	\$ 72,000	\$ 72,000	\$ 216,000
ICT, supplies, ...(\$250/mth)	\$ 3,000	\$ 3,000	\$ 3,000	\$ 9,000
	\$ 75,000	\$ 75,000	\$ 75,000	\$ 225,000
Research Assistants (UK)				
Part-time research assistant (£500/day @ 10 days/mth x 3mths)	\$ 30,000	\$ 30,000	\$ 30,000	\$ 90,000
	\$ 30,000	\$ 30,000	\$ 30,000	\$ 90,000
Final Report				
Graphic design, layout, proofing ...			\$ 5,000	\$ 5,000
Printing			\$ 2,000	\$ 2,000
Distribution			\$ 500	\$ 500
			\$ 7,500	\$ 7,500
Administration/Compliance				
Accounting	\$ 500	\$ 500	\$ 500	\$ 1,500
Administration (banking, debtors, creditors, ...)	\$ 2,000	\$ 2,000	\$ 2,000	\$ 6,000
Audit/acquittal	\$ 5,000	\$ 5,000	\$ 5,000	\$ 15,000
	\$ 7,500	\$ 7,500	\$ 7,500	\$ 22,500
Total (excl GST)	\$ 210,000	\$ 180,000	\$ 187,500	\$ 577,500
Total (incl GST)	\$ 231,000	\$ 198,000	\$ 206,250	\$ 635,250

\$192,000 x3 = UA + Dept Ed'n + Dept Emp.
subject to GCA's compliance/audit processes

ATTACHMENTS

Graduate Careers Australia
making a difference to graduates for over 40 years
www.graduatecareers.com.au

- Research reports and findings
- Salaries and employment rates
- Career information booklets
- Graduate Opportunities Jobs directory



GCA is a not-for-profit organisation established over 50 years ago by Australian universities. GCA's original charter was to compile and produce an annual directory of graduate opportunities to be distributed free to every graduating student. The directory was intended as a means of helping students transition from university to their chosen career, and for employers to promote their graduate recruitment programs. GCA produced the **Graduate Opportunities (GO)** directory every year since 1966 until the last GO directory in 2019.

In the early 1970s GCA's brief was extended to include gathering data on graduate employment outcomes. The Graduate Destination Survey (GDS) was conducted by GCA from 1974 to 2016. In the early 1990s the Australian Government widened the survey, now known as the **Australian Graduate Survey (AGS)**, to include data on student experiences at university. GCA administered the AGS from 1974 on behalf of the Australian Government in close collaboration with all Australian universities up until 2016 when the AGS was replaced by the QILT surveys.



In 2017, after loss of its AGS funding from the Australian Government and Universities Australia, GCA used its remaining funds to launch a **Graduate Research Program**. The research program ran between 2017 and 2019 providing small research grants to university researchers and other organisations to address key graduate outcome questions of employment, employability, and career development. GCA now depends on external research grants to continue its work.

Dr Noel Edge
Executive Director
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The National Association of Graduate Careers Advisory Services (NAGCAS) is Australia's peak professional body for career development in the higher and tertiary education sectors.

Established in 1990, the Association has grown to 1000 members, ranging from individuals, organisations and universities across Australia and the world. NAGCAS aims to connect, advocate and support its members, offering expertise in:

- Career development learning for life
- Graduate employability
- Work integrated and cooperative learning
- University and employer engagement
- Career development education and policy.

NAGCAS promotes an environment of professional collegiality and collaboration, connecting members who professionally support one another. Together they build a stronger awareness of the importance of career development learning in education for workforce development, social benefit and personal efficacy.

The NAGCAS Mission is to ...

CONNECT: *Employers to career services, career services to each other, career services to national and international research and trends.*

SUPPORT: *Graduate career practitioners to achieve the highest standards in their profession.*

ADVOCATE: *For the importance of career development learning in education, for workforce development, economic growth, personal efficacy and social benefit.*

<https://www.nagcas.org.au/about-us/members/our-members>

The Careers Group, University of London

The Careers Group, University of London is one of the oldest and largest higher education careers services in the UK. It is comprised of campus-based careers services who provide a range of employability support to students and graduates of member institutions. It is recognised as a centre of excellence in relation to careers and employability support for HE students and graduates.



Founded in 1909, the Careers Group has been providing careers services to universities for over 100 years.

The group is a membership organisation consisting of a range of higher education careers services supported by a small central team within the University of London which includes the in-house Professional Development and Research Units.

The Careers Group exists to ensure that each member careers service is the best it can be strategically and operationally, benefitting fully from the collaborative activities of The Careers Group whilst also ensuring that it maximises its unique institutional offering. The group also strives to be a thought and practice leader within the sector, focused on evidence-based innovation within the employability landscape.

The Careers Group includes over 200 careers and employability professionals and employability consultants working across its member services. The majority of staff are based within the member institutions, providing expertise and experience to support undergraduates and postgraduates, research staff and recent graduates; liaising with graduate recruiters from all sectors; and working with academic and other staff to embed employability learning within the student experience.

Dr Bob Gilworth, Director

Careers Registration Practical Guide

November 2019

london.ac.uk/careers/careersregistration

Foreword

Careers Registration – an ongoing revolution

It has been quite a journey so far, yet it feels like we are still near the beginning of realising the full potential of Careers Registration. We instigated Careers Registration at the University of Leeds in 2012 because we felt there was a yawning data gap which restricted our understanding of our students' career development journeys and, therefore, constrained our capability as careers professionals to do the best for them and for the University. I am grateful to the University of Leeds for backing the idea and facilitating its implementation. I am also grateful to my colleagues at the University of Leeds Careers Centre, notably Nalayini Thambar, for ensuring the idea became practical reality.

Once we saw the internal reaction to the initial data, we knew that we were onto something but had no idea of the impact beyond our institution until Nalayini and I presented our workshop "Careers Registration - a Data Revolution" at the AGCAS conference in 2013. From that moment, it was clear that colleagues were latching on to the idea and could see the potential for their own services and institutions.

Some colleagues simply went ahead and implemented Careers Registration straight away. Others asked me to help them in making the case within their institutions and in considering the strategic and operational implications of having data that they had never had before. It has been my pleasure to support those colleagues and to see the development of the community of practice, which has grown up around Careers Registration. This practical guide is a reflection of the development of that community of practice particularly that, which developed in and around the HEFCE/OFS Learning Gain project, coordinated from The Careers Group, University of London. The project was expertly managed by my Careers Group colleagues, Fiona Cobb and David Winter, who pulled together a wonderful consortium of colleagues from universities all over the UK. Their distilled wisdom is the essence of this practical guide.

Going back to having the original idea around 2011, I have been living with the idea of Careers Registration for at least eight years now, yet I was (and still am) constantly surprised and inspired by the ways in which colleagues put the idea to use and create fantastic impact from what is essentially a quite simple concept. For me as the Chair, there was at least one "Why didn't I think of that?" moment in every project Steering Group meeting. I hope that you too are inspired by the examples in this guide.



There have been some very important findings from the project, such as the "golden thread", which links career thinking to graduate outcomes. These have the potential to inform debate about theory and to underpin strategic changes in approaches to careers and employability in higher education. We will cover these in detail when we share the findings in a subsequent publication. For now, I hope that you find this practical guide to be useful.

Bob Gilworth
Director of The Careers Group, AGCAS President
November, 2019

Why have we produced this guide?

This guide is an attempt to distil some of the lessons learned by the various institutions who have implemented Careers Registration (CR) since its development in 2012 at the University of Leeds. Many of these lessons came about as a result of a three-year research project on CR as a possible measure for learning gain undertaken by a consortium of higher education institutions funded by the Higher Education Funding Council for England (HEFCE) and subsequently taken over by the UK Office for Students (OfS).

The project

- ▶ examined the validity of the data collection method
- ▶ identified common patterns in the self-reported career development of various student groups
- ▶ established a link between final year career readiness and graduate employment outcomes

The consortium included institutions who had implemented CR for a number of years as well as those who were in the process of introducing it. This provided a unique opportunity to compare the successes and pitfalls of our various experiences and to explore the different ways in which CR data was being used to inform careers service practice and influence institutional policy.

The consortium partners gained a great deal from this sharing of practice and it is our hope that this guide will extend these benefits more widely.



How to use this guide

Whether you are considering implementing CR, are collecting data for the first time or have been collecting CR data for a few years, this guide sets out practical guidance for all phases of the CR process. It contains information and advice to help with developing a business case, designing your methodology, collecting the data, and using the data effectively within your service and with your key stakeholders. This guide will support your decision making, through the sharing of best practice case studies from the CR Learning Gain project partners.

This guide is divided into three sections

1. **What is Careers Registration?** — Essential information about the methodology and tips to help you design your own
2. **Why use Careers Registration data?** — Examples of the uses to which CR data has been put and the benefits gained
3. **How to implement Careers Registration** — Prompts and questions to help you think about the best way to introduce CR to your institution and practical advice on avoiding common problems



Section One

What is Careers Registration?

Careers Registration Methodology

The Careers Registration (CR) methodology involves collecting information directly from students on their level of career readiness and the extent to which they have engaged in activities that could enhance their employability. The information is captured through a small number of questions included in the registration questionnaire that students complete every time they enrol or re-enrol. Through this method, a small amount of information is captured on virtually every student within an institution in each year they study.

CR was developed by the Careers Service at the University of Leeds in 2012 as a way of obtaining leading data on student career readiness with the aim of prioritising student support. The questions were based on evidence that engagement with career planning and the acquisition of work experience whilst at university increased chances of career success on graduation. However, they were not informed by a particular theoretical approach to career development or employability. A number of other UK HE institutions (HEIs) subsequently adopted CR but adapted it to meet local strategic concerns.

The two original core CR questions focus on

1. **Career readiness:** a subjective self-evaluation of career readiness in which students choose from a pre-defined set of statements the one that best represents their level of preparedness for obtaining a career on graduation
2. **Employability-enhancing experiences:** a behavioural measure of engagement by the student with employability-related activities, which involves the student choosing as many options as apply from a pre-defined list of activities that they may have undertaken in the previous year



Core question 1: Career readiness

The original Leeds career readiness question included 10 statements shown in table 1. For the purposes of analysis, the statements were grouped into four categories or phases of career readiness: **Decide**, **Plan**, **Compete** and **Sorted**. These categories were not visible to the students.

Table 1: The ‘career readiness’ question from the original model developed at the University of Leeds 2012

What stage are you at in your career planning? Please choose from the options below, the response which most closely matches your current position.	
I am not ready to start thinking about my career yet	Decide
I have no career ideas yet but want to start thinking	Decide
I have some ideas about my career and I am ready to start planning	Decide
I have a career in mind and intend to gain relevant work experience	Plan
I know what I want to do but I am not sure how to get there	Plan
I want to spend a year gaining experience	Plan
I am ready to apply for graduate level / professional opportunities	Compete
I am ready to apply for further study	Compete
I have been applying for opportunities and so far I have not been successful	Compete
I have a job, further study or my own business plan confirmed	Sorted

Other institutions adapted the wording of some of these questions and added other statements of their own. Examples include:

- ▶ *I would like to consider career options not directly related to my degree programme* (Decide) — to identify students (primarily on more vocational courses) who might be considering wider options
- ▶ *I have thought about my first job but have not planned my career beyond that* (Plan) — to identify students who were engaged in short-term thinking

- ▶ *I want to spend some time gaining experience, travelling and/or developing a professional portfolio before applying for jobs (Plan)* — to address concerns that students may be intending to delay their career plans but may not identify with spending a whole ‘year gaining experience’
- ▶ *I am planning to start my own business (Plan)* — to identify those who were interested in self-employment but who had not developed a detailed business plan
- ▶ *I am already working in my chosen career (Sorted)*
- ▶ *I am pursuing my current course out of personal interest (Sorted)*

The last two statements were included to identify primarily mature students who may be undertaking study without an expectation for career development who otherwise might choose the statement about not being ready.

Career readiness categories

A number of institutions also adapted the wording of the career readiness categories in order to facilitate communication with students and stakeholders about CR. Many were also uncomfortable with the seemingly linear development path of Decide-Plan-Compete-Sorted. Progression in career readiness can involve moving ‘backwards’ from a state of false certainty to a more realistic and better informed uncertainty. There were attempts to present a more cyclical process within the categorisation.

Table 2: Examples of career readiness categories from Careers Registration Learning Gain project partners

Original CR category:	Decide	Plan	Compete	Sorted
King’s College London	Discover	Focus	Action	
SOAS, University of London	Discover and decide	Plan and do	Apply and succeed	
University of Bristol	Explore	Develop	Compete	Position confirmed



Top Tips: Career readiness statements

- ✓ Use appropriate and meaningful categories to structure your responses for analysis so that you can also use them in communication with students and stakeholders
- ✓ Review the selection and wording of statements carefully to ensure that you have a valid set of distinct options which cover the likely positions of your student demographic
- ✓ Consider including an option to capture students who are studying for personal interest rather than career development

Core question 2: Employability-enhancing experience

Table 3: An example ‘employability-enhancing experience’ question

Choose ONE or MORE statements from the following regarding experience you have undertaken in the last 12 months:
I have no work experience
Self-employed/running my own business
Work shadowing
A placement (year) as part of my degree
A placement (year) I sourced for myself
Unpaid internship (organised by my institution/self sourced)
Paid internship* (organised by my institution/self sourced)
Part time work alongside my studies (related to my career plans)
Part time work alongside my studies (not related to my career plans)
I have been a mentor
I have been a mentee
Position of responsibility in a student club or society
Member of a professional organisation
Volunteering in my local community

The set of options in this question was modified considerably by each institution in order to make it easier for students to identify specific local opportunities and experience programmes. This made it very difficult to conduct cross-institutional comparisons of the data.

Institutions also introduced variations in order to attempt to differentiate the effects of certain characteristics of these experiences, for example:

- ▶ Who organised the experience — the institution through a formal programme or the student themselves? One of the strengths of CR is its ability to capture the independent employability engagement of students outside formal institutional activities
- ▶ Whether the experience was related to the students’ course or career aims

We produced a recommended standard framework for the categorisation and meta-analysis of various types of employability-enhancing experience.

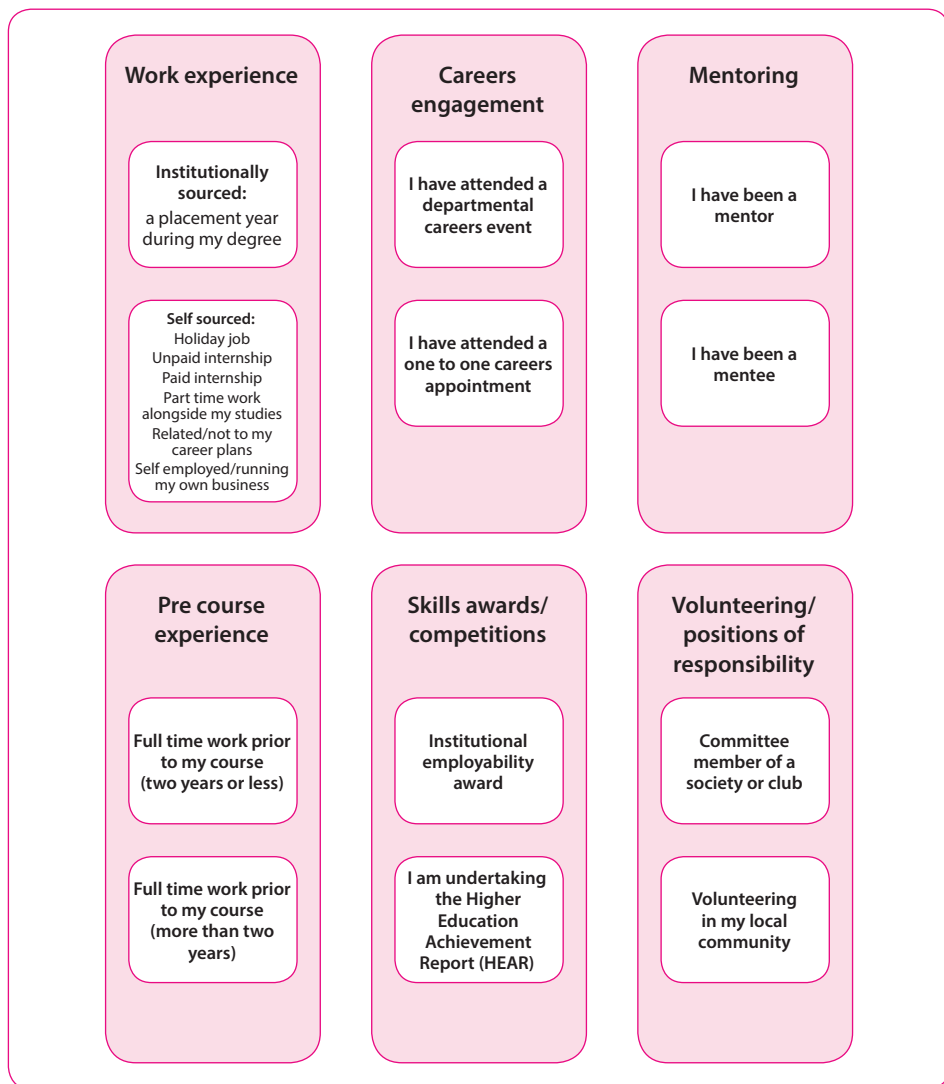


Figure 1: Employability-enhancing experience framework (Cobb, F.E. 'There's No Going Back': The Transformation of HE Careers Services Using Big Data, Journal of the National Institute for Career Education and Counselling, 42(1), 2019, 18-25. DOI: <https://doi.org/10.20856/jnicec.4204>)

Top tips: Employability-enhancing experience options

- ✓ This question should be time bound (e.g. within the last 12 months), to avoid double counting experience longitudinally
- ✓ Consider different options for first year students to capture pre-university experience, especially for mature students
- ✓ Ensure you think carefully about the types of activity you want to capture and what comparisons you may wish to make
- ✓ Ensure that this is designed as a multiple response question, so you capture the full range of students' experiences

Additional questions

A number of institutions were able to introduce additional questions into the enrolment registration.

Additional question topic	Comments
Sectors of interest	Asking students to identify one or more employment sectors that they are interested in. It allows for mapping of changing interests over the course of a degree and can inform employer engagement activities.
Work experience details	Capturing types of work experience and employer details to support employer engagement.
Career influences	Asking students to identify factors that influenced their choice of degree (particularly related to medical degrees).
Medical speciality options	Aimed at medical students to identify their selection of particular medical specialties.
Previous experience of careers support	Asking about the extent to which students had received professional careers guidance, advice and information in their decision-making about coming to university.
Regional career intentions	Asking students about the extent to which they might be willing to relocate in order to obtain appropriate graduate employment. This was relevant to certain regional institutions with restricted local graduate employment markets.
Intentions linked to enterprise / entrepreneurship	Asking the extent to which students were interested in self-employment, entrepreneurship and social enterprise.

Section Two

Why have Careers Registration?

Careers Registration (CR) has been adopted voluntarily by a large number of higher education institutions in a short time for a number of important reasons.

- ▶ **Convenient.** It is relatively straightforward to implement the data collection by adding a small number of questions to existing student registration questionnaires. This reduces the risk of generating 'survey fatigue' amongst students
- ▶ **Comprehensive.** It gathers data from every student in every year of their time at university. This ensures that we have an insight into the careers and employability needs of all students, not just those who are already motivated to engage with services
- ▶ **Current.** It allows for 'real-time' monitoring of students' career readiness and their engagement with valuable experiences. This allows institutions to identify students' needs whilst they are still at university, rather than just having destination information, which only tells you that there is a problem after they have left
- ▶ **Connected.** It can be analysed in relation to other data contained within the student record. This makes it easy to identify any correlations between CR and other student characteristics, such as subject, student background, entry tariffs, retention or attainment

Informing practice and enhancing teaching and learning

Careers Registration data is being used to:

- ▶ Provide a framework for communicating effectively about careers and employability with students and institutional stakeholders
- ▶ Inform evidence-based strategic planning and engagement with academic departments. Ensuring that academics understand the career development needs of their own students
- ▶ Evaluate the impact of career development activities and to inform the development of new initiatives
- ▶ Identify the particular careers and employability development needs of individual students or specific groups in order to enable tailored provision and marketing of services and support
- ▶ Engage employers in careers activities and events, using sectors of interest data to demonstrate interest and demand from students

This guide includes a range of case studies from institutional partners to illustrate how you may choose to utilise CR within your own context:

Full student lifecycle Careers Registration process

Case study: City, University of London

Brenda Welch, Information Manager

City, University of London implemented CR starting in 2016/17. All new and returning students are asked the same questions during online registration at the beginning of each academic year. The questions are not mandatory and students may skip without answering. Two groups of students are excluded from the survey: postgraduate students in the Cass Business School and professional programme students (LPC/BPTC) in the City Law School.

Use with Students

Students' CR answers are provided to our personal tutorial system and our career management system, enabling personal tutors and careers consultants to start discussions with students. Our Careers Consultants discuss CR results by course with students to help them understand how they are similar to most of their peers.

Use with Careers Staff

A CR workbook is provided to careers staff that allows them to generate reports on their faculties, identify students who would be most interested in their workshops and events, and provide information to employers about students' sector interests. Our Employer Engagement team use CR data in conversations with employers to help inform engagement strategy and encourage employers to participate in events.

Use with Academics

Our Head of Careers holds annual meetings with lead academics for each school to discuss the CR results for their courses.

Use with Senior Stakeholders

High-level CR reports are provided by school and course annually. CR has been presented at university-wide forums on initiatives within the institution and Student & Education committee meetings, as well as at School Senior Management Meetings & School Away Days. The CR data helps to confirm or challenge the narrative Schools have regarding employability and to influence stakeholders.

Graduation Survey

In Year 2 of CR we implemented a Graduation Survey to find out the destinations and career readiness of graduating students. By asking students the career readiness question at the end of their course of study, along with an indicator of their destination at the point of graduation, we have been able to target further information and support to those students at most risk of not obtaining graduate-level employment within the DLHE or Graduate Outcomes survey period.

Embedding CR in teaching and learning

Careers Registration is informing career development learning at SOAS. SOAS Careers piloted a theoretically-informed career development learning module based on the stages of career readiness contained within CR. The module uses experiential learning approaches to improve career related self-efficacy (an individual's self-belief in their capability to achieve and succeed).

Change Your World: Discover Your Career pilot

SOAS University of London

Kathy Williams, Senior Careers Consultant and

Philippa Hewett, Head of Careers Service

Module Overview

The *Change Your World: Discover Your Career* Pilot Employability and Career Development Learning (ECDL) Module aims to increase self-efficacy in students in order to aid them with their career planning, to engage them in meta-learning and enable them to reflect on what career success means to them personally. The recent DfE Publication 'Planning for Success' asserts that having a career plan is one of the most significant influences upon graduate outcomes. However, a large number of SOAS students enter their third year still in the 'discover and decide' phase of career thinking. Therefore, at a strategic level, intervention is needed to help move students on from the 'discover and decide' phase and enable them to consider ways to make a career plan towards a graduate level career.

It is intended that participants' movement throughout this course will be subjective, and based on their individual career thinking / career readiness. An important framework for the evaluation of this module is the AMOSSHE toolkit, which measures 'impact' as how, and what has changed as a result of the activities undertaken. Impact indicators for this module will include: students attend all sessions of the module; they demonstrate movement through the stages of career thinking (although this does not have to be 'forwards' it could be into a less decided phase - and that is not an unsuccessful result since the aim of the module is to improve their self-awareness and self-efficacy). Students answer the careers self-efficacy questionnaire again and either (a) their answers have improved or (b) they know what they need to do to improve their answers.



Embedding Careers Registration Data at Ulster University

Ulster has introduced two compulsory questions for all new and returning students as part of online enrolment. The University has remained committed to providing students with the best possible employability support but it is becoming more visible that decisions which relate to employability at a strategic level are evidence-based. The Employability and Careers Department produce Career Registration reports at an Institutional, Faculty, School/Department and Programme level.



Management and SLT (Accountability, Employability Metrics)

- Data used for Faculty Accountability Meetings
- Annual Learning Gain Reports to Learning and Teaching Committee
- Institutional TEF Assessments



Academics and Employability Consultants (Academic Development and Enhancement)

- Embedded in Curriculum Design Framework
- Embedded in Annual Subject Monitoring Process
- Embedded in Annual Employability Partnership Agreements
- Data-dashboard on the Staff Employability Portal

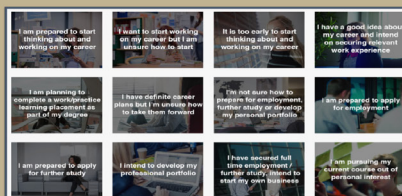
Employability and Careers

Employability Partnership Agreement
Supporting the Student Experience



Students (The Student Experience)

- Visibility of individual responses on the Student Employability Portal
- Personalised Responses and Targeted Employability Support
- Social Media Campaigns



Employer

- Increased Employer Engagement for Courses predominately at "Explore" stage

For more details contact:

Shauna McCloy, Head of Employability
Ulster University

Capturing incremental career learning

King's Careers & Employability have defined a range of learning outcomes for all careers and employability activities within the institution. This will help students to identify the learning gains expected from engaging with these activities throughout their time at university.

Case Study: Embedding Careers Registration

King's College London

Dr Kate Daubney, Head of King's Careers & Employability

King's College London have continued to investigate in depth the impact of CR data on student engagement, academic engagement, employment sector aspirations, using the data itself to explore trends. Practical steps are also underway to connect careers enrolment to student engagement and graduate outcomes data to create a student data journey, providing evidence of the relationship between levels of career planning, service engagement activity and eventual levels of graduate work or study. Being able to demonstrate the impact of careers readiness on other behaviour and graduate outcomes will support collaboration with academics on influencing students to engage earlier with their career planning, and support development of a variety of approaches to student engagement.

King's Careers & Employability has also innovated a more applied approach to the use of Q1 of the CR data, focusing on two areas. Firstly, we have designed a grid of learning gains associated with each of three phases of career readiness (Discover, Focus, Action, each aligned to some of the Q1 answers) that enable students to identify exactly how their careers and employability learning and development should change as a result of engaging with one of our areas of service delivery. This will help manage expectations of what careers service activities offer, but also encourage students to align themselves and their subsequent actions around the idea that something should change for them as a result of engaging with one of our services.

Secondly, we have introduced a short reflective process for students after their use of appointments, workshops and careers fairs and panels, to encourage them to reflect more incrementally on their careers learning. Currently, annual CR does not offer much for the student by way of helping them articulate and manage their own careers readiness progress, but this will offer a chance to do that at every interaction. It will also generate data that will allow the careers team to measure the impact of different kinds of intervention on different students at different stages of their career journey.

Capturing student career readiness at graduation

Many institutions have implemented a graduation survey to find out the destinations and careers readiness of graduating students. Liverpool John Moores University implemented a graduation survey prior to introducing Careers Registration, and the case study below outlines how they have linked Careers Registration with their graduation survey.

Closing the loop at Graduation

Case Study: Liverpool John Moores University

Joanne Ives, Deputy Director, Careers Team

Prior to our CR introduction as an institution, we already had an exit or Graduation Survey, based around employability and skills development. Since 2016, we have included the CR initial question re career phases, as part of this survey. This is now helping to provide a fuller picture of the career journeys of our students from entry to exit. It is interesting in some cases to see significant movement during the final year of study. We can now capture this and identify areas and programmes where little or no movement takes place.

From 2018 onwards individualised responses are available to Personal Tutors (and Career Advisers) on academic programmes, so the responses can form part of tutorials and pro-actively signpost students to the most appropriate provision and activities to support and enable them to develop their career decisions and plans.

Our work on CR has also led us to develop learning outcomes (gain) for all of the work delivered by the Careers Team during 2018. Using these outcomes, we hope we can better target our work to students who are in the different phases of career readiness. We believe this targeted approach will be transformational for the work of the Careers Team, and could lead to better evaluation of our work and its impact on students' individual career readiness journeys, and to a rationalising of the approach we have used previously in offering all our services to all students.

Section three

How to implement Careers Registration

In this section we present a number of questions and prompts based on our partners' experiences of implementing and using Careers Registration (CR) to help you ensure that you thoroughly consider a range of important factors before embarking on your own implementation.

Policy

1. What are your key internal and external institutional policy drivers?
2. What influence will those drivers have on what you want to achieve in your implementation of CR?
3. Is there a possibility of comparing the results of other HE surveys with CR data?

Influencing government policy

4. What hot topics in HE policy might this data feed into (or be hijacked by)?

Institutional decision makers

5. What knowledge gaps do institutional decision makers have and how might this data fill some of those gaps?

Academic departments

6. What misunderstandings of student employability and career development do your academics have that this data might correct (myth-busting)?

Careers and employability services

7. What are the resource pressures for services at present and how might this data fit alongside other measures of effectiveness and value for money you use to prioritise?

Students

8. What will students relate to? Will that vary between different groups of students?

Making the case for introducing Careers Registration

If you are planning to introduce Careers Registration, you will need to make a business case for introducing the methodology.

Effective arguments for the implementation of Careers Registration

- ✓ Live track employability
- ✓ Careers Registration data can inform decisions and resources
- ✓ Enables tailored careers provisions and interventions
- ✓ Improving interventions to support graduate outcomes
- ✓ Simple process – only two core questions
- ✓ Discipline-level employability provision planning
- ✓ Additional evidence for Teaching Excellence and Student Experience Framework (TEF) (UK)
- ✓ Raise awareness of careers support options amongst students and staff
- ✓ Measure the effectiveness of employability initiatives
- ✓ Use with individual students in careers sessions and tutorials



Sian Furlong-Davies, Deputy Head, Student Support & Careers Services University of Aberystwyth, provides us with her top ten tips for making the case for introducing Careers Registration at your institution:

Top 10 tips for making the case

1. Be sure you understand fully what you want to do and how you want to use the data you collect
2. Gather evidential examples on how the data can be utilised
3. Link use of the survey data to influential metrics e.g. TEF, Graduate Outcomes, LEO, NSS
4. Cultivate a couple of critical friends in influential positions
5. Fully brief the critical friends to maximise impact
6. Think big from the outset – aim for a full set of questions and cohorts from day one – why miss out on valuable information from the start
7. Plan your questions carefully to include all you are likely to need now and into the near future – it makes comparisons year on year much easier
8. Work out exactly how you wish the process to run, with a couple of secret alternatives as emergency back-ups if you face obstacles and need to negotiate
9. Decide who will do the analysis and ensure they have the skills – the data set itself lacks worth if it can't be analysed in a timely manner
10. Start planning as early as possible; once the deadline is missed you will have to wait another 12 months before you can implement your survey!

Planning analytics and reporting

Before you collect your data, it is important to have a defined plan in place for what you will do with the data once you have collected it, including timelines of what you will do, and by when you intend to complete each step.

- ▶ Be clear what you want to include in your reports and why – for example linking previous years data with wider trends such as Graduate Outcomes
- ▶ Decide how to structure your data reporting before you collect the data
- ▶ Create a defined project plan for how to use the data once you have collected it
- ▶ Ring fence resources for the development and maintenance of data dashboards and analytics

As you build up a year on year portfolio of longitudinal data, you will be able to start tracking student progress over time, so think about how you will make year on year comparisons, for example linking with the unique student identifier (student number) to ensure you can track career readiness journeys.

Operational considerations

- ▶ Some student record systems may not enable multiple selector responses – the methodology may need to be adapted to account for system constraints
- ▶ Consider implementation timelines - All UK project partners who have implemented have done so within one academic year (quickest two months, longest 12 months). Allow time for approvals, question refinement and system testing in your implementation plans before going live
- ▶ Compliance with data protection regulations is key and requires early consultation with regulation experts
- ▶ Check your regulations when planning who you will share the data with, what level of detail will be shared and how you will share the data securely

9. Can the questions display as compulsory to enable maximum data capture?

Resource planning

Consider the long term resourcing for analysis, storage, and sharing the data; considerations should include Business Intelligence (BI) tools, analytics tools and human resource requirements.

10. How will you make institutional comparisons - implementation, results?

Communicating Careers Registration results with your stakeholders

While you are thinking about what data you will gather and how you will analyse it, it is also worth giving some thought to how you will communicate and share data with your stakeholders (students, academics, managers, employers, etc.).



Case study: Exeter University

Oliver Laity, Careers Information and Systems Manager

Bespoke emails

After completion of the CR survey participants are automatically sent tailored emails from within the student information system according to their self-assessed planning stage (Decide, Plan, Compete, or Secured). As registration for graduation is governed by a different process we are not able to send out automated emails via SITS. Instead emails are sent out via Career Hub.

Tutor Dashboard

All personal tutors have access to the Tutor Dashboard, which allows them to not only monitor their tutees' academic progression, but also their careers progression via the Employability tab. Within this dashboard the personal tutor will be able to see their tutee's latest CR results, as well as the number of events and appointments they have attended and whether they are enrolled on the Exeter Award. All careers data within this dashboard is updated on a daily basis and reflects changes following the completing of CR at graduation sign-up.

iExeter App

All students have access to their CR responses via the iExeter App. The app also displays the careers events and appointments they have attended as well as their progress in the Exeter Award programme.

Discipline Data Packs

During July/August the Information Team compiles Discipline Data Packs for all Colleges. These reports investigate the impacts of engagement and CR on a graduate's Destination of Leavers from Higher Education (DLHE) outcome. The first of the Discipline Data Packs are issued in August and draw upon the Enrolment-Graduation comparison report put together by Business Planning. A second revision of the Discipline Data Packs are released in October and include the latest CR enrolment data.

Targeted promotions

Grouping students and graduates according to their career planning stage not only allows for the service to target these individuals via email, but also through other promotions. During the third term of 2017/2018 academic year Deciding finalists were invited to pick up a free USB stick which contained relevant resources and advice.

Supporting metrics

Careers Registration is increasingly being seen as a key measure of Learning Gain and therefore has significant potential to support TEF and WP metrics. We will be applying CR data in both of these instances.

CR forms a significant part of departmental KPI reporting, is sponsored and supported both by the Director of Education and Student Services and the DVC for Education, and has been used in college level data reporting which is increasingly informing the development of College employability and engagement strategies.

Equipping your Careers and Employability service to work with Careers Registration data

Data is not an end in itself; consider the training needs of your careers service team to enable a smooth transition to working with CR data. Key elements of this training are likely to include:

- ▶ Critically evaluating and synthesising data to identify important patterns, trends and relationships
- ▶ Constructing arguments and narratives based on data and presenting them to a range of audiences
- ▶ Representing data visually using graphics
- ▶ Developing interactive data dashboards
- ▶ Maintaining an awareness of the ethical and legal considerations of handling personal data



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'There's no going back': The transformation of HE careers services using big data

Fiona Cobb

The capacity for UK Higher Education (HE) careers and employability services to collect and analyse career thinking and employability enhancing experience data – Careers Registration data - has provided unprecedented insight into levels of student career planning, (work) experience gained, and sectors of interest. This article draws on the research findings from the Careers Registration learning gain pilot project, to identify the ways in which careers and employability delivery has fundamentally changed since the introduction of Careers Registration, and considers the impact of big data for the future of HE careers and employability delivery.



Big data in a higher education context

The 'volume, variety and velocity' (Shacklock 2016, p. 2) with which we are generating data in higher education is increasing. Throughout a student lifecycle, universities collect vast amounts of 'static' and 'fluid' data (Shacklock, 2016, p. 2). Static data is collected at regular scheduled points. Examples of static data in HE include: student data (collected at registration, including socio-demographic information and course details); student loans data; the Destinations of Leavers of Higher Education Survey (DLHE), and the National Student Survey (NSS), which collect information on employment and outcomes of graduates six months after graduation, and opinions on course quality respectively. Other examples include graduation surveys, which capture students' career thinking and plans at the point of graduation, and the Employability Health Check (EHC). The EHC is a comprehensive

questionnaire designed to help students find out how their employability skills are developing as they progress through their course, and identify areas to work on.

Learners are leaving behind a 'digital footprint' (Long & Siemens, 2011, p. 32), generating 'fluid' data through everyday digital interactions. Such data include swipe card data (swiping into lectures and/or events), logins to virtual learning environments (VLEs) (Shacklock, 2016), library checkouts, and careers service engagement data, (e.g. appointments, careers fair attendance, employability award completion). HE institutions are in the midst of a 'data explosion' (Long & Siemens, 2011, p. 32). Data is no longer a by-product of HE activities, instead data has a central role in HE decision making. The use of technology to capture, process, and analyse information to enable informed decision-making provides value and meaning to big data (Daniel, 2017). Data and analytics help to reform HE activities, to assist educators to improve teaching and learning, and to motivate and encourage students by providing them with information relating to their own performance in relation to their peers, or progress towards personal goals (Long & Siemens, 2011).

In what ways might big data and analytics enable us to track and support students to develop their employability during their time in higher education? The three most important predictors of graduates moving into professional or managerial roles three years after graduation are having a plan; having done some research; having a targeted approach to job applications; and having undertaken unpaid work experience (Shury, Vivian, Turner & Downing, 2017). Big data and technology-based approaches enable universities to identify these predictors and their

prevalence much earlier in the student lifecycle, which can support employability outcomes of current students (Shury et al, 2017).

The increase in tuition fees and the introduction of the Teaching Excellence and Student Outcomes Framework (TEF) by UK Government in 2016, has placed HE institutions under additional pressure to demonstrate how well HE institutions ensure excellent outcomes for their students in terms of graduate level employment or further study (BIS, 2016; Winter, 2018). Many UK HE careers services are taking a data informed approach to decision making and improving careers and employability delivery by utilising relevant datasets (Shah & Welch, 2018; Riding & Crowe, 2018). Sources of data include DLHE data, Careers Service Management Systems (CSMS) data (such as TargetConnect, Careerhub and Abintegro), student records data, careers service engagement data, and Careers Registration data. Leveraging these datasets allows university careers and employability services to meet internal and external demands for insight into student journeys, progression and outcomes.

Careers Registration

The Careers Registration methodology, introduced at the University of Leeds in 2012 (Gilworth & Thambar, 2013), consists of asking students to self-report their subjective state of career readiness and

to record objective actions in the form of a range of employability-enhancing activities such as undertaking an internship, completing an employability award, or undertaking part time work related to career plans. This includes both cognitive and behavioural development and is based on concepts such as vocational maturity (Super & Kidd, 1979), career success (Ng et al, 2005), and career adaptability (Savickas, 1997; Bimrose & Brown, 2015). The questions are embedded in the enrolment questionnaire completed by every student at the start of each year of study. This method of collecting data captures a small amount of cognitive and behavioural information on virtually every student within an institution. Collecting data on all students as opposed to surveying only the engaged students enables a better and more representative understanding of student needs. Careers Registration can therefore be useful in identifying the differential career development of various student groups.

The uptake of Careers Registration across the UK HE sector is widespread, with 62 UK HEIs implementing the methodology at November 2017, according to a survey of 186 UK HE careers professionals. Careers Registration is an example of how big data (a large scale, linkable, and longitudinally trackable data set) can inform decision-making and support evidence-based practice in a higher education careers and employability setting.

Figure 1: Career thinking question

What stage are you at in your career planning? Please choose from the options below, the response which most closely related to your current position.

Statement	Category
I am not ready to start thinking about my career yet	Decide
I have no career ideas yet but want to start thinking	Decide
I have some ideas about my career and I am ready to start planning	Decide
I have a career in mind and intend to gain relevant work experience	Plan
I know what I want to do but not sure how to get there	Plan
I want to spend a year gaining experience	Plan
I am ready to apply for graduate level/professional opportunities	Compete
I am ready to apply for further study	Compete
I have been applying for opportunities and so far I have not been successful	Compete
I have a job, further study or my own business plan confirmed	Sorted

Career readiness learning gain

The RAND review (McGrath, Hoareau, Harte, Frearson & Manville, 2015) defined learning gain as the 'distance travelled', or the 'difference between the skills, competencies, content knowledge and personal development demonstrated by students at two points in time' (McGrath et al, 2015, p. xi). 'Work-readiness' was a key area of interest in the RAND review of learning gain in the UK, and Careers Registration was identified as a potential measure of career readiness learning gain (Mcgrath et.al, 2015). In 2015 a consortium of 15 UK universities secured funding for a three-year project funded by the Higher Education Funding Council for England (HEFCE) to investigate Careers Registration as a potential measure of career readiness learning gain. For the purposes of the research, employability is defined as students' capacity to make well-informed, realistic plans for their future career and their ability to acquire the resources that enable them to execute these plans and successfully manage their career development in a changing world.

Careers Registration learning gain pilot project

The Careers Registration learning gain pilot project concluded in October 2018. The primary aim of this

research was to assess whether Careers Registration can allow us to:

- Track learning gain (distance travelled) in relation to career readiness and employability of students during their time in higher education
- Predict employment outcomes for graduates
- Investigate the extent to which students are engaged in activities that enhance their employability
- Evaluate the effectiveness of employability strategies and interventions
- Investigate practical issues related to the implementation of Careers Registration within institutions
- Understand the extent to which the data it provides could inform institutional strategies for careers and employability support.

Research methodology

Fifteen partner institutions implemented Careers Registration at different points over the three-year project. Institutions utilised the two core Careers Registration questions (career readiness, and employability enhancing experience) along with additional questions on sectors of interest, future plans, and enterprise. The statements of the career readiness

Figure 2: Choose ONE or MORE statements from the following regarding employability enhancing experience you have undertaken in the last 12 months:

Work experience	Careers engagement	Mentoring	Pre course experience	Skills awards/ competitions	Volunteering/ positions of responsibility
Institutionally sourced: a placement year during my degree	I have attended a departmental careers event	I have been a mentor	Full time work prior to my course (two years of less)	Institutional employability award	Committee member of a society or club
Self sourced: holiday job unpaid internship paid internship part time work alongside my studies related/not to my career plans Self employed/ running my own business	I have attended a one to one careers appointment	I have been a mentee	Full time work prior to my course (more than two years)	I am undertaking the Higher Education Achievement report (HEAR)	Volunteering in my local community

question were categorised into four key phases of career readiness: *Decide*, *Plan*, *Compete* and *Sorted*. Responses to the employability enhancing experience question were analysed under a specially devised framework (Figure 2), where institutions included unique options pertaining to their student populations. The research applied the Gilworth (2017) definition of employability as 'the capability to make well informed, realistic plans for the future and to be able to execute these as a changing world' (Gilworth, 2017).

The research captured the career readiness of 308,000 unique students cross-sectionally (one response to the survey during any of the three years of the project), and 118,378 students longitudinally (responding to the survey year on year). To develop a connected picture of students' career thinking and experience in their own personal context, Careers Registration data was linked with other types of student data. These data included student characteristics, DLHE data, graduation surveys, careers service engagement data, and the EHC at one institution. Careers Registration contains its own entry measure as students complete registration questionnaires at the start of their university journey. This allowed the measurement of change in careers thinking from entry to the start of the final year for undergraduate students (career thinking movement). Response ratios (proportions of student selecting statements from each of the categories year on year) and *Compete* category growth (increase in respondents selecting statements within the *Compete* category) were analysed.

Multinomial modelling of careers readiness statement selection (n=89,000 for academic year 2016/17) enabled understanding of the relationship between career thinking (the nominal dependent variable) and a variety of socio-demographic characteristics (independent variables) (Field, 2009). The model held *Decide* phase career thinking as the baseline, and controlled for the year of study. The initial model included nine variables: POLAR3¹ quintile, age (mature/

under 21), ethnicity, disability, fee status, gender, subject of study and career thinking phase (*Decide*, *Plan*, *Compete*, *Sorted*). Three project partners also completed multinomial modelling of career readiness and outcomes (DLHE) at an institutional level on data for a full three-year undergraduate student cycle.

Findings

Cross sectional analysis of this large and complex dataset showed that 46% of all students selected statements in the *Decide* category of career readiness when they responded to the questions in 2016/17, and 43% of final year undergraduates were still in the *Decide* phase at the beginning of their final year of study.

Career thinking movement

Analysis of career thinking movement showed more movement between penultimate and final year of full-time undergraduate programmes, whereas smaller changes in career readiness occur between years one and two of full-time undergraduate programmes. Of students responding in years one and two of their programme, 59% had no change in their career readiness. Of those that changed their career readiness, 23% selected a higher ranked statement and 18% selected a lower ranked statement. Of those students responding in years two and three of study, 61% selected the same career readiness statement. Here we see a marginally higher percentage (26%) of students selecting a higher ranked statement and 13% selecting a lower ranked statement.

Compete category career thinking

There was an observed increase of 18.28% in *Compete* category responses between years one and three of study (1.52% students in *Compete* phase in year one, compared to 19.8% *Compete* phase in year three of study). When broken down by mode of study and fee status, findings revealed higher growth in *Compete* career readiness for students with overseas fee status and undertaking full time study. Only small differences were observed between students with widening participation (WP) characteristics and the rest of the cohort.

¹ The participation of local areas (POLAR) classification groups areas across the UK based on the proportion of the young population that participates in Higher Education. POLAR classifies local areas into five quintiles based on the proportion of 18 year olds who enter higher education aged 18 or 19 years old. Quintile one shows lowest rate of participation. Quintile five shows the highest rate of participation. <https://www.officeforstudents.org.uk/data-and-analysis/polar-participation-of-local-areas/polar3/>

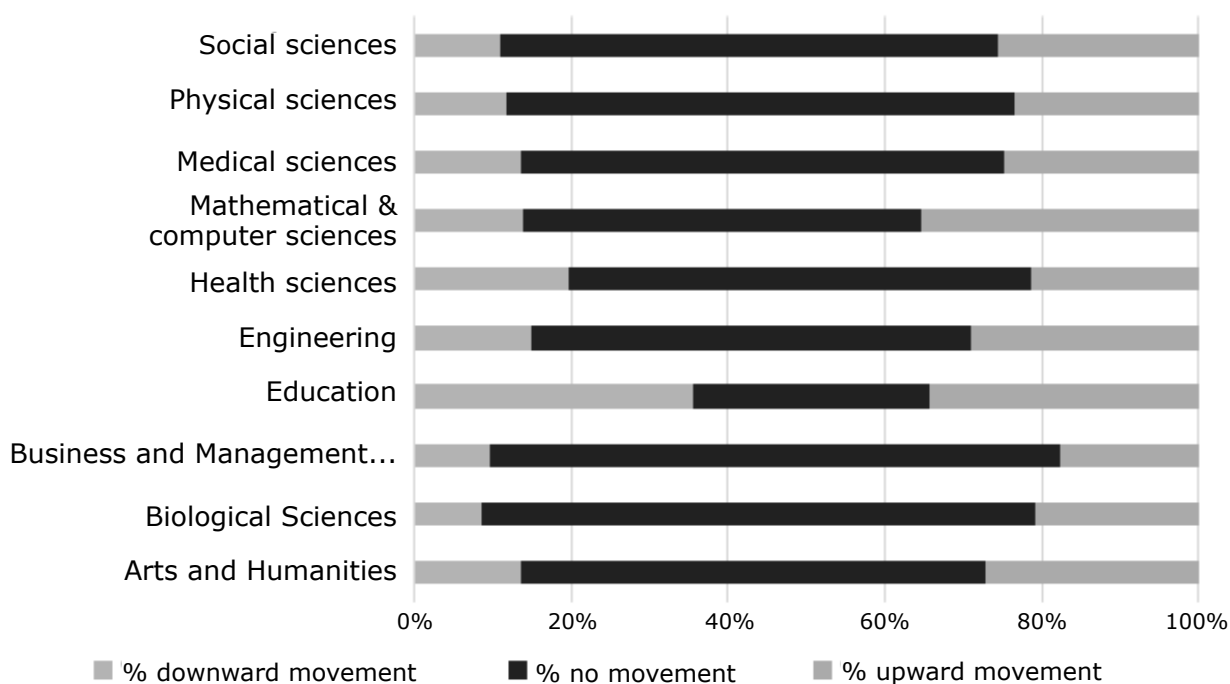


Chart 1: Y2 to Y3 tracking career thinking movement by subject of study

There were some large observed differences between subject areas. Overall non-science subjects had higher *Compete* category growth. Biological sciences had the smallest observed 'downward' shift of all subject areas (8%). Education is the only subject that showed an increased 'downward' movement in career readiness. This could be due to the wide variety of programmes included under Education subject codes, and this would benefit from further analysis at a more granular level.

Factors affecting career thinking

Four variables were significantly associated with career thinking at the 98% confidence level: POLAR3, age, ethnicity and fee status. Students from POLAR3 quintiles one and two (lowest participation neighbourhoods) were more likely to be in the *Decide* phase than *Compete* phase of career readiness at each year of study – though the effect size decreases with increasing years of study. Black and ethnic minority students were more likely to be in *Decide* phase of career readiness than white students. Young students were more likely to be in the *Decide* phase of career readiness than mature students. Home/EU students were more likely to be in the *Decide* phase than overseas students.

Career readiness and graduate outcomes

Institutional level modelling at three partner institutions found a significant correlation between career readiness and graduate outcomes. Final year students who are further along in their career planning (i.e. in the *Compete* phase) are somewhat more likely to be in employment after graduation and significantly more likely to be in a graduate role. A change in career readiness between the penultimate and final year of study has less impact on outcomes than the phase of career readiness reported at the start of the final year. The overall probability of finding any type of employment increases with the career readiness stages, and is slightly higher for undergraduates compared to postgraduates.

Analysis showed final year students who have no work experience are considerably less likely to be in employment after graduation and statistically less likely to be in a graduate role. Students who do a placement year as part of their undergraduate studies have an increased probability of finding graduate level employment. Female graduates were half as likely to be earning a higher salary (£30,000 or above) than their

male peers. Female graduates were also significantly more likely to be in the earlier phases of career readiness than their male peers.

How is Careers Registration data being used to develop professional practice?

Data is no longer a by-product of the day-to-day business of HE providers, it is a 'critical value layer' for driving strategic decision-making at an institutional, regional and sector level (Long & Siemens, 2011, p. 34). HE careers and employability services are drawing value and meaning to Careers Registration data by analysing and presenting this data for the purposes of 'holistic decision-making' (Long & Siemens, 2011, p. 36) through strategic and operational engagement with academic departments and senior managers. This includes drawing up partnership agreements; sharing subject specific data packs with academics to provide key employability information focusing on career readiness; informing institutional policy and decision making; and persuading employers of student interest in their sectors. Careers and employability services have also used the data to promote relevant events and provide support to students from at risk groups including students from WVP backgrounds, and those with no work experience, or career plan, as identified as key to graduate success (Shury et al, 2017).

Careers Registration data is included in institutional key performance indicators and metrics. Access to quick, timely, accurate and connected data allows careers and employability services to engage responsively with their stakeholders (students, academics, employers, senior managers). Careers Registration has the potential to be a component of a standardised measure of learning gain in relation to student employability and is in widespread use as a local measure in the institutional context.

The ability of careers and employability services to visualise, contextualise and communicate the data with staff and students in a timely manner is key to supporting decision making in real time, and gives value to the data (Daniel, 2017), to help students engage with, and develop their own career readiness.

Limitations

Careers Registration is a self-reporting tool and is therefore potentially subject to self-reporting bias (Bryman, 2016). In particular, students near the start of their studies may have more limited or unrealistic awareness of their future options, preferences and their own capabilities. This may lead them to over-report their state of career readiness. For example, students on biomedical sciences programmes may start their studies with the expectation that this will lead to them studying medicine in the future and so report themselves as having a career plan in mind. As they progress in their studies, they may gain a better understanding of how likely this really is or may become aware of other options available to them. This may cause them to select lower ranked statements on subsequent surveys. They will appear to go 'downwards' on the scale but their career thinking has become more realistic. The methodology uses a compact data collection tool, which is simple to implement within the student registration process. Whilst this means we capture data on the majority of the student populations, improving the reliability of our findings, we are limited on the level of detail we can collect. The development of a standardisation framework (fig 2) to account for institutional differences in methodology, notably the wording of questions and response options, makes it possible to analyse Careers Registration data at a sector level. This could allow for regional, mission group and subject level benchmarking on a national scale.

Conclusions

There is no going back for careers and employability services in terms of big data and analytics. Careers Registration data provides unprecedented insight into what students are doing to plan their career, and the experiences they are gaining to support their employability. The research findings support and build upon the findings of previous research into graduate outcomes (Shury et al, 2017). The findings demonstrate that being further along in your career thinking, and undertaking employability enhancing experience such as internships or holding a position in a student club or society are associated with graduate level outcomes. The knowledge that just under half

of all students are still in the *Decide* phase of career thinking at the start of their final year of study enables HE providers to plan timely interventions and streamline resource allocation to support students at pivotal points in their student journey. This can help students to progress their career planning, gain helpful experience and review their own progress.

Access to this data is both an opportunity and a challenge. Careers and employability services are not traditionally set up to deal with this kind of large-scale data, and there is a need to build greater data capacity within services. Improvements to data capacity could include more intuitive CSMS and dashboards. Subsequently there is a need to develop staff data capabilities and confidence. Manipulating, visualising and explaining Careers Registration data are central to ensuring that the value of such large-scale data sets to careers and employability services are shared with students and staff to enable targeted resourcing and support to help learners develop their employability and plan their future.



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Australian careers registration research project

questions and considerations for research proposal

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Policy context

1. What are your key internal and external institutional policy drivers?
2. What influence will those drivers have on what you want to achieve in the project?
3. The Australian Student Experience Survey (SES) offers better joined up surveying than the UK model – is there a possibility of comparing the results of the survey with Careers Registration data?
4. Will you need to address graduate attributes (QILT) with your methodology?

UK policy context

Through the Office for Students (OfS), the UK Government has been pushing to make higher education a private good, focusing on individual student return on investment. Externally imposed metrics, lately the **Teaching Excellence and Student Experience Framework (TEF)**, place a significant emphasis on graduate-level employment or further study outcomes as well as measures of long-term employment outcomes (LEO) linked to job role and salary.

The outcomes data was based on the **Destination of Leavers of Higher Education (DLHE)** survey (snapshot 6 months post-graduation). DLHE has been replaced by **Graduate Outcomes (GO)** which takes place 15 months post-graduation. The GO survey contains additional student voice questions:

- Does your current activity fit with your Future plans?
- Is your current activity meaningful and important to you?
- I am using what I learned during my studies in my current activity

Other data comes from the **National Student Survey (NSS)**, which contains a limited number of questions on the availability and effectiveness of employability support.

The UK Careers Registration research project

5. Is there a consistent model of employability used in participating institutions/across the sector which might shape the content of your careers registration questions?

Careers Registration (CR) was developed by the careers service at Leeds University as a way of obtaining leading data on student career readiness with the aim of prioritising student support. The questions were based on evidence that engagement with career planning and the acquisition of work experience whilst at university increased chances of career success on graduation. However, they were not informed by a particular theoretical approach to career development or employability. A number of other UK HE institutions (HEIs) adopted CR but adapted it to meet local strategic concerns.

In 2015 a consortium of HEIs won funding from the then Higher Education Academy to investigate the use of CR as a measure of learning gain linked to employability and work readiness. The link to learning gain shaped the priorities (success criteria) of the project.

1. Cross sectional and partial longitudinal analysis of careers registration data
2. Comparison of CR data with DLHE, one smaller cohort comparison with other measures of employability, retention rates
3. Evaluation of the effectiveness of data collection and data quality
4. An examination of the usefulness of CR data for informing student engagement, needs of specific student groups and collaboration with academic departments and employers
5. Recommendations for implementation of CR in institutions as a standardised methodology.

The pilot project team (made up mainly of careers service staff) were particularly interested in success criteria four and five for informing professional practice and the wider scalability of the approach.

Intended uses of research outputs and data

Influencing government policy

6. What hot topics in Australian HE policy might this data feed into (or be hijacked by)?

Influencing institutional strategy — stakeholder engagement

Institutional decision makers

7. What knowledge gaps do institutional decision makers have and how might this data fill some of those gaps?

Academic departments

8. What misunderstandings of student employability and career development do your academics have that this data might correct (myth-busting)?

Careers and employability services

9. What are the resource pressures for services at present and how might this data fit alongside other measures of effectiveness and value for money you use to prioritise?

Students

10. What will students relate to? Are there key differences between on campus and 'cloud campus' distance learners?

Operational considerations

Student record systems

Some systems may not enable multiple selector responses –the methodology will need to take into consideration system constraints.

11. Can the questions display as compulsory to enable maximum data capture?

Implementation timelines for new adopters of careers registration

All UK project partners who have implemented have done so within one academic year (quickest two months, longest 12 months). Allow time for approvals, question refinement and system testing in your implementation plans before going live.

Data sharing

Compliance with data protection regulations is key. A robust data sharing agreement is required for sharing data between project partners and a central data processing hub.

Resource planning

Consider the long term resourcing for analysis, storage, and sharing the data; considerations should include BI tools, analytics tools and human resources.

12. How will you carry out the work at a national level and combine the data?

13. How will you make institutional comparisons - implementation, results?