Enacting strategies for graduate employability: How universities can best support students to develop generic skills (SP13-3258)

Final report 2015

Lead Institution: Curtin University

Partner Institutions:
University of Sydney,
University of Melbourne,
Flinders University,
Australian Council for Educational Research

Report authors:
Professor Dawn Bennett (Curtin University);
Dr Sarah Richardson (Australian Council for Educational Research);
Dr Philip MacKinnon (Australian Council for Educational Research)

Team members:
Professor Dawn Bennett (Curtin University);
Dr Sarah Richardson (Australian Council for Educational Research);
Dr Philip MacKinnon (Australian Council for Educational Research)
Ms Marian Mahat (University of Melbourne);
Dr Lisa Schmidt (Flinders University);
Professor Phil Poronnik (University of Sydney);
Professor Hamish Coates (University of Melbourne);
Ms Rose Knight (Australian Council for Educational Research)

http://graduateemployability.curtin.edu.au/
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Requests and inquiries concerning these rights should be addressed to:
Office for Learning and Teaching
Department of Education
GPO Box 9880,
Location code N255EL10
Sydney NSW 2001

<learningandteaching@education.gov.au>
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Achievements Statement

The project ‘How universities can best support students to develop generic skills: Enacting strategies for graduate employability (SP13-3258)’ was led by Curtin University in partnership with the University of Sydney, the University of Melbourne, Flinders University and the Australian Council for Educational Research. The final report was delivered in March 2015. Project resources can be found at http://graduateemployability.curtin.edu.au/

The project aims were twofold: to increase understanding of critical issues in enhancing graduate employability in higher education; and to identify support for educators seeking to develop student employability. Key achievements and outputs include:

- Survey data from 415 students in three countries;
- Case study data from 60 individuals (graduates, students, leaders, careers advisors);
- A website with a “toolkit” of resources for enhancing graduate employability;
- Eleven employability workshops including a half-day workshop at the 2014 Bond University National Forum, a half-day workshop at the 2015 Higher Education Research and Development Society of Australasia (HERDSA) conference, and a half-day workshop and expert panel at the 2015 International Society for the Scholarship of Teaching and Learning (ISSOTL) conference (see Appendix F for project activities);
- Six academic papers by team members;
- Presentations at 32 conferences and events including the RMIT National Employability Forum, Bond University's Teaching and Learning Symposium, and the Joint CubeNet/ViBEnet/National Committee for Biomedical Sciences Forum;
- Case studies with performing arts graduates developed into career “profiles” for Music Australia’s national Music Journal, with negotiations underway for resource sharing with the UK-based Incorporated Society of Musicians and the Department of Culture and the Arts, Western Australia;
- Career development and sustainability adopted as a priority for Music Australia’s National Music Industry and Careers Advisory Group;
- Refinement of tools and resources developed through CI Bennett’s Australian Learning and Teaching Fellowship (2010), trialled with 1,700 students in 2014;
- Industry snapshots and/or graduate outcomes summaries (Appendix G); and
- Aggregated data summaries for four institutions planning employability initiatives.

Moving forward:

- Continued development of the toolkit;
- Analysis of a combined dataset of 1,095 responses from students in this and extant projects (Bennett, 2008, 2009; Bennett et. al., 2014; Male & Bennett, 2015);
- An international alliance to enhance employability in music, launched March 2015;
- Initial agreement with nine national and international bodies to share project resources and link with the website;
- A new international network of educators and leaders with whom toolkit development and collaborative research will extend the findings and impact; and
- A symposium on employability in science, technology, engineering, and mathematics (STEM) at the LH Martin Institute (June 2015).
Executive Summary

1. Project context
This project responded to growing social and economic demands for higher education graduates who can negotiate rapidly transforming employment contexts. It was based on the premise that higher education institutions have responsibility for helping students gain the skills, knowledge and personal attributes required of them in the initial stages of their careers. The project emerged from the understanding that despite evidence on what is required by employers, the existence of graduate attributes statements, and a large body of scholarly literature, many graduates are not optimally “work ready” (Fullan & Scott, 2014).

The project was implemented in parallel with two other commissioned projects on graduate employability. This project focused explicitly on the experiences and needs of students from disciplines with ill-defined or difficult-to-enter graduate destinations: music and dance; biomedical sciences and biotechnology; professional and creative writing; and computer science. Given the focus of the other projects on employers and to avoid replication, the team focused on the perspectives of students, graduates and academic leaders.

2. Project aims
The project aims were twofold: to increase understanding of critical issues in enhancing graduate employability in higher education; and to identify support for educators seeking to develop student employability.

3. Project approach
The project adopted a multi-stage approach involving four overlapping core activities:

- To *synthesize* through a scoping review existing research on employability, its development, and impediments to its adoption within higher education;
- To *investigate* employability through survey and case study research with students, graduates/practitioners, higher education leaders and careers advisors;
- To *showcase* good practice with higher education stakeholders through a series of workshops and presentations; and
- To *develop* a toolkit of employability resources for educators to use with their students.

In *Phase 1: Student survey and scoping review*, the team designed an online student survey instrument that included items from extant data sets for comparison. The survey was distributed through academic networks and instrumentalised for delivery in English, Spanish and Portuguese. The team also prepared a comprehensive scoping review of extant literature and resources relating to students’ enhancement of employability skills, impediments to practice, and ways in which these impediments might be overcome.

In *Phase 2: Case study research and resource development*, the findings of Phase 1 informed four distinct case study instruments. Case studies were undertaken with students, graduates/practitioners, leaders and careers advisors. An evidence-based discussion paper synthesised the findings and identified options for improved institutional capacity. This informed a “toolkit” for which team members synthesised resources to develop employability with higher education students. The toolkit is hosted by Curtin University.
4. Project outputs

Outputs from the project included:
- Survey data from 415 students and data summaries for four institutions;
- Case study data from 60 stakeholders and 10 vignettes for the targeted disciplines;
- A website and toolkit housing resources from this project and other sources;
- An open-access conference paper;
- Industry snapshots; and
- Guides for educators.

5. Project dissemination and engagement

The team implemented a dissemination and engagement strategy that leveraged the work of this and previous employability projects. Engagement activities included 32 conference presentations, 11 workshops and 6 related papers, including presentations at national events organised by the other commissioned project teams. Half-day workshops and an expert panel were presented at two national conferences and a national forum. The website includes employability toolkit resources organised around the five themes discussed below.

6. Impact of the project (outcomes to date and projected future impact)

- More than 470 stakeholders have contributed to the project's findings;
- To date, more than 1,500 academics, leaders and practitioners have attended presentations at university learning and teaching events and at conferences;
- 1,720 students and educators have attended in-class workshops;
- Resources trialled with 1,500 students in 2014 have been embedded into their courses;
- Four institutions have received data summaries to inform their employability initiatives;
- Industry organisations with an interest in career support and development have begun to link to and from the website and resources;
- Educators who ran the survey have adapted resources for use with their students; and
- Post-project activities, including through the website, will encourage systemic adoption.

7. Key findings and recommendations

This project has enhanced understanding of graduate employability, particularly in relation to the contrasting perspectives of different stakeholders. The research confirms that to identify and develop the skills and attributes needed to navigate post-graduation pathways, higher education students need timely and informed support. Graduates assert that the lack – or under-development – of these skills and attributes is one of the most critical disadvantages encountered by graduates transitioning into work.

Educators are central to the process of change, but higher education leaders, graduates and students report many educators to be ill equipped for the task. One reference group member reminded the team of a “fundamental disconnect” between the development of employability within higher education and those academics who “would say that universities are not ‘responsible’ for anything, except perhaps the pursuit of truth and beauty”. As such, the resources for educators were likely to have three audiences. The first and second of these cohorts are most likely to be interested in sharing and accessing resources. These educators became the target audience for the online toolkit:

1. Educators who agree they have a role in the development of employability, and who have the skills and resources to undertake this task;
2. Educators who agree they have a role in the development of employability, but who need some assistance to engage students and others; and
3. Educators who do not agree they have a role in the development of employability and are unlikely to engage unless required to.

The concerns expressed by students, graduates, employers and leaders related largely to academics’ lack of knowledge about the contemporary workplace; however, the case studies also revealed barriers including over-crowded curricula, modularised delivery, research-focused key performance indicators and ranking systems, an increasingly casualised workforce, and graduate destinations metrics that are insufficient for the task. Educators who attended the project’s engagement activities repeated many of these concerns. Combined, these factors highlighted the urgent need for a systematic approach to the development of effective employability skills. The research concluded that employability development should focus on the following five themes as Figure 1 illustrates:

![Figure 1: Five employability themes](image)

8. **Recommendations**

This project has found that employability is a critical concern for higher education and should be addressed as a matter of urgency. Recommendations are as follows:

1. That institutions embed and resource employability as a key institutional strategy, engaging the expertise of careers advisors and professionals at program and course level and developing an endorsed capacity building strategy for local leaders;

2. That all students explore and apply knowledge relating to self and career as foundational elements of their program. This should be achieved through authentic learning experiences that incorporate critical reflection and ensure that emerging capabilities are evidenced using a valid framework;

3. That program delivery reflects professional practice and that all educators be supported to become industry-aware and pedagogically proficient;

4. That higher education position itself to gather academic and learning analytics that track student behaviour and the development of employability capabilities and competencies;

5. That revisions of the Graduate Destination Survey be consultative and ensure the generation of data which is sufficiently nuanced to capture complex work arrangements, using a validated measure; and that the Office for Learning and Teaching explore the ongoing collection of graduate data through agreement with the Australian Taxation Office and the Department of Education and Training;

6. That the Office for Learning and Teaching establish a “linkage” program to support industry partnerships that benefit both students and educators; and

7. That higher education institutions develop post-graduation support and professional learning initiatives as an extension of their core business.
# Table of Contents

Acknowledgements ................................................................. i  
Achievements Statement ...................................................... ii  
Executive Summary .............................................................. iii  
Tables and Figures .................................................................. vii  
  Figures ................................................................................. vii  
  Tables ................................................................................... vii  
Chapter 1 - Project objectives and methodology ............................. 1  
  Online student survey ........................................................... 1  
  Case study interviews ............................................................ 3  
Chapter 2 - Employability: what do we already know? ....................... 4  
  What is graduate employability? .............................................. 5  
  Interventions that enhance student and graduate employability ......... 6  
Chapter 3 - Students and employability ....................................... 7  
  Students’ strategies for enhancing their employability .................... 8  
Chapter 4 - Enhancing the employability of students ....................... 11  
  Developing self ....................................................................... 11  
  Developing career awareness ................................................ 12  
  Developing skills and knowledge .......................................... 13  
  A framework for developing employability ............................... 14  
Chapter 5 - Resources for educators ......................................... 15  
Chapter 6 – Conclusions and recommendations ........................... 17  
  The elephant(s) in the room .................................................. 17  
  Recommendations ................................................................... 17  
  Recommendations for future work ........................................ 20  
References ............................................................................... 23  
Appendix A - Student survey instrument ...................................... 26  
Appendix B - Case study instruments ......................................... 36  
Appendix C - Case study sample .............................................. 50  
Appendix D - Interventions that enhance student and graduate employability ..................................................................... 51  
Appendix E - Case study vignettes .......................................... 54  
Appendix F - Project activities .................................................. 64  
Appendix G - Industry snapshots .............................................. 67  
Appendix H - External evaluation ............................................. 85  
Appendix I - Deputy Vice-Chancellor Certification .......................... 86
Tables and Figures

Figures

Figure 1: Five employability themes ................................................................. v
Figure 2: Employment outcomes, Graduate Destinations Survey 2013 (per cent) .......... 5
Figure 3: Students’ strategies for enhancing employability (n=765 valid responses) .... 9
Figure 4: Framework for developing employability ............................................. 14
Figure 5: Format of the eSage toolkit resources .................................................. 16
Figure 6: Snapshot of the Developing Employability website ................................ 16

Tables

Table 1: Survey respondents by broad field of education ..................................... 2
Table 2: Percentage of students who referred to the employability categories (survey) .... 7
Chapter 1 - Project objectives and methodology

The objectives of this project were twofold: to increase understanding of critical issues in enhancing graduate employability in higher education; and to identify support for educators seeking to develop student employability. To achieve these aims the project adopted a multi-stage approach involving four overlapping core activities:

- **Synthesise** existing research on employability within the context of higher education;
- **Investigate** employability with students, graduates, leaders and careers advisors;
- **Showcase** good practice with higher education stakeholders; and
- **Develop** a toolkit of employability resources for educators.

The project focussed on four disciplines and sub-disciplines: the performing and visual arts (focussing on music and dance); life sciences (biomedical sciences and biotechnology); humanities (professional and creative writing); and computer science. The project leveraged synergies with other OLT initiatives including the commissioned projects led by Bond and RMIT universities. Given the focus of the other projects on employers, the team focused on the perspectives of students, graduates/practitioners and higher education leaders.

A scoping review created a succinct overview that highlighted areas of concern and consolidated the collaborative network for the project. The review included academic literature, policy papers and data sets.

Online student survey

The research found that improving employability for general degree graduates requires multiple changes including the explicit teaching of employability skills; engaging students in career-relevant activities; and working to change stakeholder perceptions of graduates. To identify possible improvements the team focussed on students as the “output” of higher education institutions. This followed the advice of Oliver (2011, p. 105), who has advocated collaborative work to identify “what graduates can do in readiness for employability” and to help educators identify, develop and assess the necessary skills and capabilities.

The online survey of students explored the research questions from the perspective of higher education students. It extended Australia’s Graduate Destination Survey (GDS) and Australasian Survey of Student Engagement (AUSSE) data through the inclusion of common questions and themes from extant studies (Bennett, 2009, 2012, 2014). These will enable further post-project research.

A small pilot study refined the survey instrument ([Appendix A](#)), which incorporated questions for comparative analysis as above together with questions that addressed the research questions defined by the project. Participants in the pilot were excluded from the survey. The survey instrument began with questions about education, work and demographics, progressed to questions about career expectations and aspirations, and then asked participants to respond to questions about their current degree program. The survey included a validated measure of professional identity developed by Adams, Hean, Sturgis and Clark (2006) for use with higher education students, and items from the AUSSE, the GDS, and CI Bennett’s (2012, 2014) previous workforce research.
Once ethical approval had been secured, participants were recruited via discipline organisations, higher education networks, peak bodies and university mailing lists. Recruitment took the form of email invitations and short written calls for participation. Additional participants resulted from engagement activities. Whilst the team promoted the survey to potential participants in the target disciplines, responses were accepted from across the sector. This was an unknown population (Heckathorn & Jeffri, 2001) and the team does not claim that the survey is representative of the student and graduate population. It is essential that caution be used in interpreting the data, which provide insights into the expectations and aspirations of respondents in this study but cannot be assumed to indicate broader trends.

The survey was administered to higher education students between July 2014 and January 2015. It required approximately 15 minutes for completion; there was no duplication in respondents. Table 1 illustrates survey respondents by broad field of education. There were 380 undergraduate student participants from Australia and 35 from other countries. Participant ages ranged from 17 to 64; 59.8 per cent was female.

<table>
<thead>
<tr>
<th>Field of education</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bio-science and medical science</td>
<td>30</td>
<td>7.2</td>
</tr>
<tr>
<td>Information technology / computer science</td>
<td>43</td>
<td>10.4</td>
</tr>
<tr>
<td>Visual and performing arts</td>
<td>172</td>
<td>41.4</td>
</tr>
<tr>
<td>Communications (professional and creative writing)</td>
<td>17</td>
<td>4.1</td>
</tr>
<tr>
<td>Occupational therapy and other health disciplines*</td>
<td>112</td>
<td>27</td>
</tr>
<tr>
<td>Other Social Sciences*</td>
<td>17</td>
<td>4.1</td>
</tr>
<tr>
<td>Other fields (less than 10 responses per field)*</td>
<td>14</td>
<td>3.4</td>
</tr>
<tr>
<td>Not given</td>
<td>10</td>
<td>2.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>415</td>
<td>100</td>
</tr>
</tbody>
</table>

* Responses received from students outside our target disciplines

Emphasising belief in the data as reported by participants (Creswell 2007) the project employed a “naturalistic” coding process (Vogt et al., 2014) that started with readings of each response without codes being applied. Categories were then developed using a constant comparative analytical scheme (Glaser, 1965) that involved unitising and categorising the text to form defining categories. These were brought together into provisional categories related to common content.

Finally, categories were aligned with extant categories in Dacre-Pool and Sewell’s (2007) employability framework, the Core Skills for Work Framework (Commonwealth of Australia, 2013a) and The Australian Blueprint for Career Development (Commonwealth of Australia, 2010). Further readings informed the development of new themes and categories and led to the development of five overall employability development themes.

Questions repeated from previous research employed a-priori codes. Coding was then compared and refinements applied using the GDS/AUSSE coding as a thematic framework. This led to a final codebook and a database using Statistical Package for the Social Sciences (SPSS) quantitative software version 22. Four institutions received an individualised report in which aggregated responses and key themes were documented.
Case study interviews

The team conducted individual and focus group interviews with students in the final stages of their degree in each of the four disciplines; graduates from these disciplines with employment or industry experience; academic leaders; and careers professionals. The interview instrument was designed to extend discussion of the research questions, to gather feedback and comment on initial findings, and to clarify emergent themes. Questions were derived from the OLT project specification.

The case study instrument (Appendix B) was adapted for each stakeholder group. Respondents had ample opportunities to divert the conversation as required to capture their thoughts and opinions. The team determined that case study data would inform a number of profiles for use in higher education.

The team employed expert purposive sampling, which is an established qualitative research method “wherein one or a few individuals are solicited to act as guides to a culture” (Tongco, 2007, p. 147). In this case the team first identified the desired number of stakeholders in each group and then identified potential participants. Invitations to participate were issued by phone or email and interviews were recorded. Case studies were completed with 23 graduates, 22 students, 13 academic leaders and 2 careers advisors (see Appendix C) from six Australian states and territories; 52 per cent were female.

Interviews were recorded and either transcribed verbatim or used together with notes for direct analysis. A naturalistic coding process started with readings of each transcript without codes being applied. Categories were then developed using a constant comparative analytical scheme that involved unitising and categorising the text. This approach is similar to that taken by other researchers (cf. Kreiner et al., 2009).

To establish the credibility of findings the team generated extensive quotes from the data, used multiple investigators to collect and analyse data, and employed peer examination to corroborate the findings. This allowed for the emergence of new themes and categories and some thematic reduction. Coding categories, interpretations and conclusions were confirmed with interviewees when the meanings were unclear (Lincoln & Guba, 1985). The final five themes were as follows:

- Develop skills and knowledge;
- Develop self;
- Develop career awareness;
- Interact with others; and
- Navigate the world of work.

Once initial findings were determined, an evidence-based discussion paper presented potential options for improved capacity. The paper discussed the development of a toolkit to showcase resources, good practice, research findings, and strategies for change. Feedback from critical friends and reference group members informed the final analysis, the structure of this report, and the format of the website and toolkit.
Chapter 2 - Employability: what do we already know?

Higher education institutions are arguably responsible for helping students to gain the skills, knowledge and attributes required of them in the initial stages of their careers, and for ensuring their ability to adapt to changing workforce needs. Although not all educators may agree with this statement, most institutions are moving to accept its veracity.

A large body of evidence on employer expectations has informed graduate attributes statements and a wealth of scholarly literature. Despite this effort, however, institutions do not appear to be preparing their students effectively (cf. Harvey & Shahjahan, 2013; Walter & Radcliffe, 2007). Moreover, for the growing number of graduates who create their own work and manage multiple roles, the gap between higher education and being “work ready” is even more pronounced (Bennett & Bridgestock, 2014; Cranmer, 2006; Tomlinson, 2009).

International studies (cf. McKinsey & Company, 2013) indicate that institutions rate their employability performance more highly than do employers. At the same time, research highlights diminishing institutional discretion in shaping what employability means in line with the pressure of educating for “third parties” such as employers (Boden & Nedeva, 2010). There is also disparity between what employed graduates identify as important employability skills and what was addressed in their degrees (cf. Koppi & Naghdy, 2009).

The Australian Graduate Destination Survey (under revision) is widely quoted in relation to graduate employment, but these data are collected six months after graduation and report only a single job at a time when graduates are still establishing themselves in the labour market. As such, the data are insufficiently refined to create a nuanced understanding of graduate work. Moreover, respondents who are seeking work are assumed to be unemployed rather than seeking additional work from a position of under employment. These data can be misleading. For example, graduates from the performing arts and biological sciences are regarded as having poor employment outcomes. When only full time employment is considered, this appears to be the case. However as shown at Figure 2, when other forms of work are included the employment outcomes of all students emerge as relatively similar. Impediments to the development of employability must be overcome if graduates are to commence their careers with maximum momentum. The need for systemic change is arguably most acute within disciplines that lead to work in ill-defined, complex or difficult-to-enter sectors. These are disciplines in which the development of employability is most challenging and most urgent. These graduates work hard to define, create and manage their careers, and in these economic sectors there is often little help from strong professional groups because they rarely exist in a discrete form (Bennett & Bridgestock, 2014). To give an example, one case study participant was a literature graduate who gave her main occupation as a writer. Her portfolio of work also included mentor, teacher, musician, healer (yoga, massage), music therapist and researcher. Between these roles she was fully employed. A graduate from the visual arts also described multiple roles, and he remarked on the need to develop self-awareness and an “integrated practice”. He felt that higher education would need to undertake “an overhaul of undergraduate courses” to achieve this.

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Figure 2: Employment outcomes, Graduate Destinations Survey 2013 (per cent)
(Data supplied by the Department of Education for use in this project)

What is graduate employability?

There exist many definitions of graduate employability. These reflect differences in the underpinning beliefs about what why, what and for whom employability matters. Common definitions include “the capability to move self-sufficiently within the labour market to realise potential through sustainable employment” (Hillage & Pollard, 1998, p. 2); “skills required not only to gain employment, but to progress within an enterprise so as to achieve one’s potential” (ACCI & BCA, 2002, p. 3); “a set of achievements – skills, understandings and personal attributes – that makes graduates more likely to gain employment and be successful in their chosen occupations” (Yorke, 2006, p. 8); and “a set of skills, knowledge, understanding and personal attributes that make a person more likely to choose and secure
occupations in which they can be satisfied and successful” (Dacre-Pool & Sewell, 2007, p. 280). It is evident in these definitions that views on employability have shifted over time from an emphasis on individual job-getting to one “that places at its core the individual acquisition of a set of attributes that makes one appealing to a heterogeneous range of employers” (Boden & Neveda, 2010, p. 42).

Competing definitions of employability reflect contrasting views about the role of higher education institutions in developing employability. Yorke and Knight (2004), for example, suggest that many of work-related skills are not learned until graduates are in a workplace. This view is supported by an evaluation of the effectiveness of employability interventions (Mason, Williams & Cranmer, 2009), which found that beneficial effects were lost within three years. There is also disagreement about the transferability of graduate skills to new contexts (Perkins, 1995). Research by Dreyfus and Dreyfus (1985) and others (cf. Ferry & Ross Gordon, 1998; Daley, 1999) suggest that when individuals move into a new context, their performance is diminished while they learn to recognise salient aspects of the situation.

A growing number of scholars distinguish between gaining employment and having the requisite skills to obtain or create work; as Wilton (2011, p. 87) suggests, “it is possible to be employable, yet unemployed or underemployed”. It follows that many scholars argue for the development of employability to focus on the development of the individual. This is in line with what Baxter Magdola terms individual “self-authorship” (see Barber, King & Baxter Magdola, 2013). The rationale is that as students “(re)conceptualise their strengths, interests and goals” (Bennett, 2012, p. 27) in relation to self and career there is a corresponding increase in career curiosity, student engagement, the capacity for creativity and problem solving, active agency in the learning domain, and motivation to learn.

**Interventions that enhance student and graduate employability**

Existing employability initiatives are variously embedded or bolted-on to the curriculum; mandatory or optional; and formally assessed or recognised in other ways. They include extra- or co-curricular activities; explicit support for finding graduate work; work-integrated learning; and whole-of-program initiatives. Despite the benefits of a systemic approach to employability development, sector-wide, institution-wide and program-wide initiatives are problematic because of inter-institutional competition, diffuse institutional management structures and modularised delivery. Notwithstanding these challenges, a number of successful interventions show that systematic change is possible (please see Appendix D).

As Kim (2001) argues and the examples of systemic initiatives illustrate, actions at the highest organisational level have the greatest potential to effect transformational change. In fact, change will not occur unless stakeholders articulate, explore and align their mental models and then develop a shared vision together with goals and priorities to focus collective effort. Such an approach would enable the design of policies and programs that align with and scaffold change towards the shared vision. As employability development is a shared challenge, shared solutions are a logical first step.
Chapter 3 - Students and employability

This chapter focuses on students and employability, presenting a snapshot of data from the online student survey and case study interviews. The chapter begins with students’ perceptions of what employers look for in graduates and how students might enhance their own employability. The chapter then turns to student feedback in relation to their programs. Further data summaries and articles can be found on the website from mid-2015.

Students were asked to consider what employers look for in graduates. Shown at Table 2, student responses focused on discipline-specific skills and knowledge. This was also a commonly perceived difference between students and a professional in their field.

Table 2: Percentage of students who referred to the employability categories (survey)

<table>
<thead>
<tr>
<th>Employability categories (%)</th>
<th>What employers look for in graduates</th>
<th>Professional characteristics</th>
<th>Differences between self &amp; professional</th>
<th>Contribution of degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skills and knowledge</td>
<td>75</td>
<td>54</td>
<td>31</td>
<td>53</td>
</tr>
<tr>
<td>Developing career awareness</td>
<td>53</td>
<td>62</td>
<td>27</td>
<td>21</td>
</tr>
<tr>
<td>Interacting with others</td>
<td>40</td>
<td>67</td>
<td>9</td>
<td>30</td>
</tr>
<tr>
<td>Developing self</td>
<td>46</td>
<td>34</td>
<td>19</td>
<td>19</td>
</tr>
<tr>
<td>Navigating the world of work</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Valid responses (total respondents)</td>
<td>293 (415)</td>
<td>886 (1043)*</td>
<td>584 (935)*</td>
<td>242 (415)</td>
</tr>
</tbody>
</table>

* Includes data drawn from repeated items in team members’ previous studies

It is not surprising that students considered skills and knowledge to be more refined in graduates; however, only 53 per cent of students believed that their degrees would give them the skills and knowledge required to begin their future careers, and case study participants confirmed this finding. As one established graduate suggested, the relevance of coursework to the real world of work is often not realised by, or made clear to students: “Where my degree … failed, has been, sort of, relevance to the real world, in that people don’t draw the parallels for you so you don’t necessarily start drawing them yourself”.

Asked to consider the characteristics of professionals in their discipline, students emphasised both skills and knowledge and also the behaviours and skills required to work effectively in a professional environment. Over 40 per cent of students referred to being career aware, interacting with others and managing self as important aspects of employability; however, only 30 per cent believed they were prepared to interact with others, and only 19 per cent felt able to guide their personal development. Students made little reference to navigating the world of work.

Asked to identify the information sources used to develop an awareness of possible careers and their characteristics, 63 per cent of students reported that they had looked to educators. This was more than double their use of other information sources, which emphasises the central role of educators and the corresponding need for all educators to be industry aware. Higher education leaders repeated concerns about the capacity of educators to provide students with up-to-date information on industry and careers, explaining that many academics have focused their careers on research and/or teaching, and consequently may have little connection with professional contexts.
Given the importance of educators in developing awareness of work and career it was surprising that only 10 per cent of students had discussed career plans “often” or “very often” with their lecturers. This corresponds with the 2012 AUSSE data (ACER, 2012) and might be explained by student expectations that careers advice should come from another source: “It would be helpful to bring into the mix the ability to talk about career options and pathways. Like a coach who knows the options and knows how to navigate and who to connect with according to the pathway”.

Students also asked for programs to be delivered in a way that reflects professional practice: Though the degree is providing the most basic requirements of this profession, it is lacking a teaching style that imitates one for the real world, thus it is not maximising the preparation required to work in the real world. This finding reflects work done by Scott et al. (2010) and by Scott and Yates (2002), whose work with graduates emphasised the need for integrated, problem-based, real-world learning and assessment. However, for educators who do not know what professional practice looks like, this is an impossible task.

The findings highlight a significant issue in that students would like educators to help develop their career awareness and to help them understand the relevance of their studies to future work - both core elements of employability development. At the same time, heavy workloads, crowded curricula and the prevalence of students balancing both work and study leave few opportunities for this engagement. An additional concern is that casual and part-time educators, who are often industry aware because of their concurrent industry involvement, rarely have the time or physical infrastructure to counsel students.

**Students’ strategies for enhancing their employability**

Students (n=975) were asked what strategies they would use to resolve the differences they had identified between themselves and a professional. Analysis, which included extant data from the team’s previous studies, highlighted the seven categories illustrated at Figure 3. As seen, the most common strategies for developing employability characteristics were further study and practice. Surprisingly, students placed equal focus on this strategy regardless of whether they had held full-time work, part-time work, or had no work experience at all.

Few students, however, were able to explain what they would study or how they would practice, signifying that they fall back on skills and knowledge without knowing what else might be required. Less than 1 per cent of students indicated that they would make use of university resources. Asked why, case study graduates were adamant that students need support beyond practical assistance such as résumé writing: “What is missing is enough time to empower individuals with generating a plan or seriously looking at options in a supportive environment … developing an integrated practice that both acutely hones personal interest and pushes beyond comfort zones to demand a greater portfolio of potential creative employment avenues” (case study graduate). This was a recurring theme.

One area about which students had very clear strategies was graduate study. Many final-year students (228 of the 373 respondents) were planning to undertake graduate study and they spoke of this as a pre-requisite to obtain work in their specialist areas. Low levels of graduate employment and high levels of graduate study in areas such as the biosciences can be reported as a negative graduate outcome (see Norton, 2014), and yet it is at the graduate level that specialist studies commence. Alongside this, however, is an institutional obligation to inform incoming students that graduate study is likely. Just 30 per cent of the
case study graduates reported that their experiences of work and career aligned with the information provided by their institution before they started their course.

Another dominant theme concerned work-integrated learning. Only 11 per cent of students referred to experience within or related to industry as a strategy for enhancing employability; however, this response was highly discipline contingent. The variation in response was initially thought to relate to established work placements within some programs: 112 responses came from students in Occupational Therapy or allied health, of whom 39% mentioned work-integrated learning. The importance of industry experience, however, also came through in the case studies, which were conducted only in the four broad target areas. As one student explained, “while nearly at the end of my degree I still have very little confidence in techniques and skills that would be required for future work. I think more opportunities to practise what we learn is hugely important”. Ironically, biomedical students were better able to articulate specific employability skills and attributes when discussing their part-time jobs than when discussing careers in biomedical science.

Ferns (2014, p. 84) has stressed that partnerships between university, industry and community are crucial to ensuring “a relevant and authentic student experience”. Having demonstrated the positive impact of WIL on student work-readiness, Smith, Ferns and Russell (2014) recommended that WIL opportunities be built into curricula. The findings of this study concur, and this is an ideal time for action given the launch in March 2015 of a national WIL strategy aligned with Australia’s Higher Education Standards Framework.

Students who responded to the survey whilst in their final two years of study (n=163) were asked how they would identify career and work options, find work and develop necessary skills and knowledge. These questions were derived from a self-assessment within the Core Skills for Work Developmental Framework (2013). Students reported that they were already using familiar processes; however, they lacked confidence in their ability to find work and to present their skills and knowledge to potential employers or clients. This lack of confidence echoes reports from the case study graduates, of whom only 23 per cent believed their courses would “mostly” or “completely” prepare them for work or employment. Moreover, Enacting strategies for graduate employability
although students were aware of the need to use both formal and informal sources to develop their skills and knowledge, only 35 per cent used feedback and self-reflection.

Overall, 56 per cent of students reported the need for explicit help and support: “I strongly believe there should be an elective/optimal unit of study that helps deal with the transition from student to full-time employee”. These data raise questions about the responsibility, forms and timing of employability support as well as the capacity of higher education institutions to provide it. Of interest, one higher education leader commented on the need for post-graduation services for graduates (see Appendix D for examples). This has become increasingly common in the UK and merits further exploration in Australia.

Perhaps one of the most vital findings of this project came from the 178 students who gave feedback on their degree programs. The students identified five related areas of concern. Each of these areas was subsequently identified by case study graduates and practitioners. The first concern was that students did not understand the careers for which they were studying or their possible roles within them; the need to develop self and career was mentioned by 42 per cent of students. The second concern was insufficient or non-existent industry experience; within our target disciplines, 17 per cent of students expressed the need for industry experience. Third was the delivery of undergraduate degrees, which 25 per cent of these students believed did not reflect professional practice and should be reviewed. The fourth concern related to the need to develop generic skills alongside disciplinary knowledge. This was mentioned by 11 per cent of students overall. Finally, 11 per cent of students also remarked that educators were not sufficiently industry-aware and/or pedagogically proficient.

In summary, of 242 students who responded to the survey only 53 per cent believed their degrees would give them the skills and knowledge required to begin their future careers. Students named lecturers as the dominant source of career information and yet less than 10 per cent of them discussed careers regularly with their lecturers, indicating that information relating to industry and career was expected to come from elsewhere. Senior leaders agreed, and industry experience emerged as a critical inclusion.

Students expected to become more employable through further study and practice, and in this respect less than one per cent expected to use university resources. Most graduates had been unaware of opportunities to enhance their employability whilst students. Despite reporting elsewhere that their skills and confidence were of concern, students rarely considered the development of non-technical skills and knowledge. Final-year undergraduate students lacked confidence in their ability to find work and to present their skills and knowledge to potential employers or clients, and only one-third used feedback and self-reflection. For many students, graduate programs were a necessary pre-requisite to obtaining work in a specialist area.
Chapter 4 - Enhancing the employability of students

If, as academics, we are unclear as to what exactly we are aiming at, then it seems reasonable to expect that students will be even less clear as to what they should be learning and employers and society at large will be unsure of what they are getting in the way of graduates. (Barrie, 2005, p.3)

This chapter discusses findings from the case studies with students, graduates, practitioners, higher education leaders and careers advisors. Following the approach outlined in Chapter 1, the case studies sought a more nuanced understanding of employability development.

Developing self

The data confirm that the core of developing employability is developing self. This supports claims that many students enter higher education with little notion of what might follow or how their intended industry works (Arum & Roska, 2011). Others, guided by unrealistic or mythologised ideas about the nature of work (Bain, 2005), focus on pre-determined goals and might fail to consider other possibilities (Marcia, 1987). These ideas can be perpetuated during higher education: “The thing is, we are teaching the dream” (dance educator).

These students risk graduating with little exploration of self or career and with under-developed skills in complex reasoning, critical thinking and communication (Arum & Roska, 2011). Moreover, they are unlikely to be prepared to negotiate barriers such as intense competition for entry-level work, which is likely to result in a self-managed portfolio of roles (Bennett & Bridgstock, 2014). Against this background it is not surprising that graduates of generalist degrees experience personal and professional identity uncertainty as they attempt to transition into the workforce (Nyström, Dahlgren & Dahlgren 2008).

The question of how to enhance the employability of students has led to increased scholarly interest in the definitions people have of themselves in terms of work and career (Meijers 1998). These definitions, or career identities, influence, regulate and support the strategies employed to build one’s work, learning and career (Bennett et al., 2014). They also change in response to experiences, learning, motivations, meanings and values (Fugate et al., 2004). As such, higher education is well positioned to enhance employability by engaging students in their development. Many case study graduates, however, reported that as students they were unaware of such opportunities. Moreover, graduates who recalled opportunities to enhance their employability also remembered having little motivation to engage in them.

Students are more likely to engage in learning that is perceived as relevant to their futures (Blumenstyk, 2014), and learning designed to enhance employability is no exception. It follows that the delivery of higher education needs to make explicit connections between student learning and the professional context. Moreover, the development of employability has to be delivered overtly; it is not simply absorbed by learners as they work through their programs. Senior leaders agreed that making explicit links between learning and future work is an essential and yet challenging issue for higher education:

... we may be failing by not making those [links] explicit either in learning outcomes or merely telling them, “Look what you’ve accumulated as a result of that presentation”, and sometimes I think stressing that is really quite important – that’s partly a curriculum failure in some ways and partly it could be a product failure ... we are not making them sufficiently pedagogically broad so that the students have that range of attributes when they graduate.
The capacity of systemic initiatives to effect transformational change is unequalled, and the team strongly recommends a systemic approach to developing employability. However, the thinking in relation to developing self influenced the design of resources with the potential to facilitate “subtle shifts [which] can have big effects on outcomes when they instantiate identity-behavior links” (Oyserman, 2010, p. 1029).

**Developing career awareness**

The case study findings confirmed those from the survey, which identified that degree programs are rarely sufficient in and of themselves to deliver a good employability outcome. The 13 case study graduates who reported that their programs had “mostly” or “completely” prepared them for work and employment came from three different institutions, but they were all graduates from Arts and Writing. Consistent with Mason, Williams & Cranmers’ (2009) finding that employability is enhanced through industry placements and the involvement of industry in program delivery, graduates emphasised the importance of industry exposure to their development of professional behaviours and skills.

The most common response from senior leaders was the urgent need for increased industry engagement. One leader remarked that in addition to the benefits this would have for students, greater industry engagement might enable more diversity in the career paths of academics. Further, opportunities for academics to move between industry and academia might help institutions to stay abreast of industry change: “to adapt courses to the needs of the job market: change from supply driven approach to a demand driven approach”. Discussed in Chapter 3, another aspect of developing professional behaviours and skills is the delivery of programs in a way that reflects professional practice. Again, partnerships with industry might help to create these authentic learning environments.

A number of challenges arose in relation to industry partnerships. One of these concerned the research focus of the higher education sector, which can position diversification as “damaging to your career” (life sciences academic). Agreeing with this sentiment, one senior leader called for “more flexibility in Australian Higher Education so that there can be more movement between industry and academia without it being detrimental to careers”. Whilst this is beyond the scope of the current study, it merits further attention at the policy level.

A similar high-level challenge relates to *The Fair Work Act*, which has negatively impacted the availability of non-credit bearing placements and work experience. Senior careers advisors spoke of confusion around the Act, which is yet to be tested in law and is, therefore, open to many different interpretations. Because of the risk-averse nature of many universities, “the multiple interpretations of the Fair Work Act results often in co-curricula programs being cancelled”. Further challenges relating to the Act include competition within and across higher education institutions and between the curricular and co-curricular space. This situation is exacerbated for international students. One careers advisor explained that to resolve this, Australia needs “a cultural shift such that employers commit to providing work experience opportunities. That includes institutions as employers”.

The potential for industry exposure and experience to equip students for navigating the world of work is unrivalled. Without these opportunities, higher education students do not understand the context/s in which they will work and they are unable to plan accordingly. As seen in the following quotes, many graduates sorely feel this disadvantage:
• You’re gaining all these skills, but you don’t know what to do with them;
• I didn’t really know what to expect;
• I just didn’t have a concept of how you get from A to B: how do you get to that place?
• I’ve had to fly by the seat of my pants ... meetings and networking, reading ... professional development workshops, mostly around ... dealing with people.

Asked what advice they would give students in relation to enhancing their employability, leaders focussed on the need for generic skills such as being able work with others in a professional setting. This echoes the experiences of graduates, of whom 57 per cent emphasised the need for communication skills and only 39 per cent mentioned discipline-specific skills and knowledge. Graduates also noted that employers seek better interpersonal skills, versatility, and the ability to apply skills in a professional environment.

**Developing skills and knowledge**

The challenges of navigating an increasingly complex world of work have already been preaced, as have the links between developing self, understanding the characteristics of work, authentic delivery and industry experience. In line with the survey results, 56 per cent of case study graduates were unable to commence their chosen careers when they graduated. Again, this had less to do with technical or discipline-specific skills and more to do with deficits in the generic skills required to navigate the world of work:

... you need, even personal skills, communication skills ... it’s more your networks and how you communicate and how you market yourself and use social media and all of that, as a package, to get work ... My university didn’t really offer any of those... (Graduate)

Many graduates spoke of the importance of both paid and unpaid work when developing their employability. Biomedical graduates, for example, highlighted the value of volunteer roles that had given them access to clinical settings. For many students, work was unrelated to their higher education studies. This illustrates that work experiences enhance both the development of professional behaviours and skills, and the development of self: “there are things you can only learn through direct experience of work” (graduate). Business leaders concurred, emphasising the importance of being able to transfer skills to new contexts: “Moving from corporate life to entrepreneurship or even switching industry sectors requires particular skills, and the transferability of skills should be explored during degree programs”.

Another theme that emerged in both survey and case study data concerned the information given to incoming students; only 30 per cent of case study graduates agreed that this information was adequate or accurate. In line with this, one senior academic called for institutions to review the promises made to incoming students according to the employability statistics published on graduates:

*Universities (and we’re not unique in this) have got themselves into this bind ... and I think we have an attendant responsibility to make sure ... the “talk we talk” can be met by students “walking the walk” in terms of jobs. And I think we can do that better ... unless we can do that, unless we can provide the training, they’re going to stop paying the fees.*

Information given to enrolled students also arose, with graduates from the Arts and Writing stressing the importance of educators who have a good understanding of the contemporary workplace. This was in stark contrast with reports from the biosciences and computer science, where one graduate expressed his frustration about “people not active in profession trying to teach you about the profession”.
A framework for developing employability

The case study data confirmed the five indicative themes identified in Phase One of the study. On the basis of the combined data set, these were refined to include broad definitions as shown below at Figure 4.

![Diagram of framework for developing employability]

**Figure 4: Framework for developing employability**

Adopting the principle of action research: *plan – act – observe – reflect*, the framework is designed to help educators respond to the emerging needs of students and to maximise opportunities for the development of employability within higher education. The visual illustrates that it is cyclical in nature; steps will tend to recur and learners will move back and forth between the elements, most often engaging in more than one element at any one time. Learners should be active participants in the development process and reflexive in their engagement with it, such that early cycles inform later cycles.
Chapter 5 - Resources for educators

At a macro scale, the findings of this study add weight to calls for higher education institutions and the higher education sector more broadly to adopt a systematic approach to employability. This may include some or all of the following:

- Adopting whole-of-institution strategies that support holistic approaches to the development of employability;
- Undertaking an audit of existing approaches to identify good practice and disseminate this throughout institutions and across the sector;
- Building and sustaining partnerships between institutions and industry partners;
- Collaborating with careers advisors to embed employability in the curriculum;
- Resourcing professional development, support and recognition for educators seeking to develop employability among their students; and
- Creating post-graduation support programs for graduates.

It is beyond the scope of this project to address all these elements. Instead, the team focused on a single, vital element: namely, resources that educators can utilise with students. These have been combined into an online employability development ‘toolkit’.

The toolkit was designed to support educators who are involved in the leadership, design and delivery of higher education teaching and learning. The immediate target audience was educators who are working with students: those who are just beginning to engage in employability development; and those who are looking for resources and community with which to expand their repertoire. The toolkit is a living resource to which users are encouraged to add input, ideas and shared resources.

The initial toolkit content is informed by, but moves beyond research to transform graduate outcomes for the benefit of students, employers, clients and educators. It is grounded in, and supported by case study examples of good practice and it also consolidates some existing resources.

Acknowledging the growing evidence that the development of employability requires more than just in-class activities (Billett, 2009; Cranmer, 2006), the toolkit includes strategies for integrating multiple resources and pedagogical approaches. In short, the toolkit of resources showcases good practice together with tools in forms such as:

- Mechanisms for addressing employability skills and strategies at a program level;
- Exemplar case studies; and
- Tools and resources for the use of educators.

For the purposes of this project the team defined a tool as a learning object that can be repurposed for use in multiple contexts, and a toolkit as a set of tools kept together for a particular purpose. As such the team proposed that each “tool” be structured into a learning object that consists of content, supporting information for practice, and/or assessment items based on a single learning objective (Hodgins, 2002), shown at Figure 5. This work will continue post-project.

Enacting strategies for graduate employability
The toolkit focuses on making existing resources accessible and user friendly for educators. At the same time, it includes reflective activities to help educators think about the what, who and how of employability: what they consider employability to be, and which elements might most important to their students; what role they might play in helping students enhance their employability; and what differences they would like to make to their students’ development.

Initial toolkit objects include:

- Vignettes developed from the project case studies (see Appendix E for examples);
- Tools adapted from sources with Creative Commons licences: for example, the Australian Blueprint for Career Development and the TILE Approach;
- Links and overviews for external resources such as graduate attribute tools from Griffith University, Self and Peer Assessment Resource Kits from the University of Technology, Sydney and the STARE Framework;
- Tools for educators, organised under each of the five framework elements;
- Guides for educators seeking to engage students; and
- Frequently asked questions.

The toolkit is located at www.graduateemployability.curtin.edu.au. A screenshot of the homepage is shown at Figure 5.
Chapter 6 – Conclusions and recommendations

In an era of technological change, growing skills shortages and an ageing workforce, the development of work-ready, resilient graduates is critical for Australia’s economic and social wellbeing. At the same time as work requirements are rapidly transforming, workers themselves are more mobile than ever before: each year in Australia “around two million people start new jobs and leave old ones, and about half a million workers change industry” (Commonwealth of Australia, 2013b, p. 19). It follows that “employability” has to be maintained across the career lifespan.

Change, therefore, is needed both within higher education (teaching) and among graduates themselves (learning) to incorporate adaptability, innovation and resilience into graduates’ skills sets and attributes. With this in mind, the questions that concern us now are the “what, who and how” of graduate employability: What needs to be done? Who needs to do it? How can it be accomplished? This chapter brings in the voices of Australian higher education senior leaders who provided expert commentary on these questions and the findings of the research. Leaders’ names are included where permission was given to do so.

This project team has put forward the argument that definitions of employability featuring linear career progression, particularly within the context of employment in a single organisation, are increasingly obsolete. Rather, the team advocates a definition that accommodates complex patterns of work in which multiple roles and/or mobility is common. Following the definitional shift from an emphasis on getting a job to one focused on development of the individual, the team adopted the following definition not of employability itself, but of sustained employability development:

Effective employability development is characterised by life-long critique of self and career to inform the skills, knowledge and attributes required for sustainable and meaningful work that benefits the individual and society. (Bennett, forthcoming)

The elephant(s) in the room

The research findings highlight important considerations for higher education institutions, including two that are often left unsaid. The first of these is whether higher education institutions can meet the demands of both industry and scholarly research. As one academic leader explained

... focusing purely on the immediate needs of industry may not always be good. There is a tension between preparing students for the immediate needs of employment and developing disciplinary depth and knowledge breadth in the graduate.

A second senior leader added that the dual demands of graduate employability and life-wide learning present a significant challenge:

Universities have to work with two lenses at the same time ... to focus on the first job and make sure that students land in a job of graduate level when they leave ... and they also have to wear a second lens which says, “but we have to prepare you intellectually, and conceptually, and creatively for a career and a lifetime of different sorts of jobs”.

Professor Geoffrey Crisp, Dean of Learning and Teaching at RMIT University, noted the overwhelming focus on the functional aspects of employability, whereas employability skills could more usefully be defined as
... questioning why we do things the way we do, why things work the way they do, why are we not doing things differently and how can we do things better. So I do not see an incompatibility between enhancing the employment prospects of students and encouraging the traditional values that are at the heart of higher education.

Asked how the challenges of graduate employability might be overcome, leaders’ suggestions ranged from whole-scale reviews of higher education curriculum to more immediate measures such as ensuring that all students receive accurate information about the careers of graduates from their programs. Overall, there was acceptance that

You have to stay true to the essential ingredients of the academic program, but its applications in the wider world of work seem to be something you should build on and develop and embed very early on.

Coming back to whether higher education institutions can meet these demands, project data made it very clear that students look to educators for guidance and that they expect industry relevant delivery and content. In this respect one of the most difficult challenges is the ability of academic teaching staff to offer informed guidance about an industry with which they may have had little (recent) contact. In the current research project, leaders from research-intensive universities most keenly felt this concern. As one leader stated:

Many academics will say, “the burden on me is to teach what I know, what I’ve spent the previous ten, twenty, thirty years learning and researching and the spinoffs from that may increase the employability of the student” ... they’ve never had to work in the way that many of these students have ... as soon as we start to admit we’ve got expertise beyond our academic training - I think we have to be cautious about making that claim.

There are, then, three cohorts of higher education educators to engage in this discussion. The first concerns industry aware educators who are already working to enhance students’ employability. These are educators whose leadership and expertise might enable program-, institution- and sector-wide initiatives. The second cohort concerns educators who are industry aware, or willing to become so, and who are prepared to learn how to develop students’ employability. These educators are likely to change their practices if supported to do so. The third cohort encompasses educators who have no interest in employability development. It is unlikely that the latter cohort will engage in voluntary initiatives; rather, immediate initiatives should focus on peer learning and support with cohorts one and two.

These practical concerns were accompanied by scepticism about the graduate deficits reported by employers and the mounting pressure to satisfy employers’ requirements. This harks back to the discrepancies between perceptions of institutional performance (Koppi & Naghdy, 2009; McKinsey & Company, 2013) and pressure from external stakeholders (Boden & Nedeva, 2010). Comments such as this point to the second elephant: whether higher education institutions want to develop employability.

There was consensus among higher education leaders consulted for this project that higher education institutions share the responsibility of developing employability at undergraduate and graduate levels. For one Vice-Chancellor, furthering this goal requires support for a common “understanding and interest in enhancing and developing contemporary employability”. However, the research illuminated tensions between higher education’s mission of developing and expanding students’ understanding of the world, and developing the practical skills necessary for work. Higher education leaders agreed that it would be a mistake to focus at either end of the spectrum. These comments add to current debate
about the benefits and disadvantages of teaching- and research-intensive institutions. They also highlight once more the focus on functional aspects of employability. In line with this we note that many researchers are heavily involved with industry. If there were less focus on research outputs and income, these academics might play a unique role in employability development. This was also mentioned by one Vice-Chancellor:

Interestingly our best researchers who have high industry contact are often in the best spot to provide advice. We must get staff closer to industry and business, understanding the world from their perspective.

As mentioned, the skills and knowledge of educators arose as another crucial concern. This was articulated by one of the project’s reference group members, who argued,

The great bulk of Australian university academics, outside of ... fields with very clear intended career outcomes, know nothing at all about what graduate jobs exist in their fields of study ... nor about how to find those jobs. Most have never worked outside of academia, and many have limited contacts with industry, and nor do they want to have any. They do not see it as part of their job to help students with their careers, beyond writing the occasional letter of reference. They do not want to “sacrifice” classroom time to talk about careers ... the basic problem is that they don't have anything to say, and don't particularly want to have anything to say.

This is a significant problem, and one that can only be addressed through strategic change. Educators need leadership, guidance and community. Educators also need to be recognised for their engagement with employability development and they need access to resources for use with students without the need for significant prior knowledge.

As such, in line with the UAE’s reference group, the policy says we provide education and we should decide what that education includes, and the market will decide if we are right.

Asked about the potential institutional benefits of a focus on employability, one Vice Chancellor commented that graduate outcomes are “hugely reputational and will be increasingly so. It is how the Ivy League survive in the US”. It is important that Australian institutions learn from such experiences, particularly in cases where employability has been high on the agenda of institutions for some time. Indeed, institutions in the UK and the US are already seeing reputational benefits around employability in terms of increased enrolments and graduate outcomes.

Deakin University Vice-Chancellor Professor Jane den Hollander asserted that employability development is unquestionably the responsibility of higher education institutions. Professor den Hollander emphasised that employability forms

... part of the compact with students. This has always been the case and is now in sharp relief because jobs are scarce and digital disruption is causing confusion. Employability is not employment. Employability is the collection of evidence - learning outcomes, experiences and knowledge - that enable a student to be fit for the purpose of employment.

She continued:

Policy says we provide education and we should decide what that education includes, and the market will decide if we are right.

Another senior leader made a simple business case: that for every student who does not receive relevant, active learning from responsive, informed educators, there is a financial loss: “every student who leaves at the end of year one takes approximately $20k funding

Enacting strategies for graduate employability 19
with them. Lose 5 and you lose an academic salary”. This is not the advocacy message that the team would choose to adopt, but it does help to make a compelling case for action.

Returning to our opening comment that the development of work-ready, resilient graduates is critical for Australia’s economic and social wellbeing, Curtin University’s Vice-Chancellor, Professor Deborah Terry, positioned the need for strong employability outcomes within the national and international context:

Universities are a critically important part of a strong innovation system. This is a consequence of our research capability and achievements as well as the quality of our graduates. For this reason, we must, as a sector, do all that we can to ensure the employability of our graduates in order to provide the skills base that will underpin our future economic and social prosperity.

It is within this context that employability development could be enabled and enacted across higher education.

**Recommendations**

The findings of this project indicate that employability is a critical concern and should be addressed at all levels of higher education as a matter of urgency. Specific recommendations are as follows:

1. That institutions embed and resource employability as a key institutional strategy, engaging the expertise of careers advisors and professionals at program and course level and developing an endorsed capacity building strategy for local leaders;

2. That all students explore and apply knowledge relating to self and career as foundational elements of their program. This should be achieved through authentic learning experiences that incorporate critical reflection and ensure that emerging capabilities are evidenced using a valid framework;

3. That program delivery reflects professional practice and that all educators be supported to become industry-aware and pedagogically proficient;

4. That higher education position itself to gather academic and learning analytics that track student behaviour and the development of employability capabilities and competencies;

5. That revisions of the Graduate Destination Survey be consultative and ensure the generation of data which is sufficiently nuanced to capture complex work arrangements, using a validated measure; and that the Office for Learning and Teaching explore the ongoing collection of graduate data through agreement with the Australian Taxation Office and the Department of Education and Training;

6. That the Office for Learning and Teaching establish a “linkage” program to support industry partnerships that benefit both students and educators; and

7. That higher education institutions develop post-graduation support and professional learning initiatives as an extension of their core business.
Recommendations for future work

This report concerns the findings from one, twelve-month project. A number of issues, some already raised, are deserving of further attention. These are discussed in the final section of the report.

Understanding employability

The research has illustrated that data collected through the Australian Graduate Survey provide an insufficiently nuanced snapshot of graduate work. Revisions to the Survey (scheduled for 2015) must be consultative in order for indicators to amass data in accordance with contemporary employment patterns; however, they will always be limited. Broadening this approach to collect data on graduate pathways throughout the career lifespan would enable a far more nuanced understanding of employability. In this regard there may be scope to more accurately track students, post-graduation, using their Commonwealth Higher Education Student Support Number (CHESSN). This is the mechanism that allows the Australian Taxation Office (ATO) to reclaim student debt via the Higher Education Contribution Scheme (HECS). It therefore provides a direct link between a student’s education record and their subsequent employment history.

The link would allow the collection of very accurate information regarding post-graduation employment outcomes, job transitions, level of employment and return to study. Equally, it would allow this information to be disaggregated for particular target groups such as the graduates of generalist degree programs. This approach would, presumably, require a revision of the current data-sharing provisions between the ATO and the Department of Education and Training, including data protocols and privacy legislation. However, the potential benefits for future students and graduates may well justify such amendments.

Another potentially valuable data set would link graduate outcomes with learning analytics. Particularly worthy of attention would be an investigation of the role that different types of assessment play in enhancing graduate employability. Similarly, being able to predict graduate outcomes would help identify best practice in strategies for employability.

Enhancing employability

Collaborative structures that harness sector-wide expertise in graduate employability would help the higher education sector to address this shared challenge. Australian Vice-Chancellors might consider coordinating an initiative that develops these structures. Whilst employability is at risk of becoming the next institutional “sales pitch”, there appears to be sufficient shared concern for collaborative activities to merit serious consideration.

In short, enhancing employability emerges as an issue for systemic change that will initially require internal (institution) and external (government) funding. Enhancing employability will demand curricula that develop the intellectual, creative and employability capacity of graduates to benefit themselves and society. It will also necessitate institutional leadership positions that facilitate the program-wide curricular teams needed to achieve curricular reform.

One of the most under-utilised resources in relation to employability development concerns institutional careers advisory services. These services exist at almost every institution and are often regarded as tangential to core institutional activities, with little collaboration
between careers professionals and educators. Bringing these groups together would enable expertise to be shared. Again, examples and lessons from institutions that are engaging in this work would enable more of this integration across the sector.

This project identified overwhelming support for enhancing employability through authentic curricula that enable students “to engage in the consequences of their learning in the real world”. Change such as this requires new thinking around students’ authentic learning experiences; however, industry-based programs will never be sufficient in number for the whole student population. Rather, students should engage in work-integrated learning opportunities together with work within the community, within the institution, and within entrepreneurial settings.

Of note in terms of initiatives that encourage industry partnerships are the mobility programs that exist at national and institutional levels (see Appendix D for examples). These programs encourage student exchanges and industry-research partnerships; however, at every level they appear to ignore learning and teaching. The Office for Learning and Teaching might consider creating a “Linkage” program focussed on learning-industry linkages. These opportunities have the potential to develop employability in students, professional understanding among academics, educational understanding within industry, and employability understanding among researchers.

One of the challenges in relation to this concerns multiple interpretations of the Fair Work Act. This, together with competition for placements within and across higher education institutions and between the curricular and co-curricular space, limits opportunities for students to enhance their employability through work opportunities. Future work might consider solutions such as government inducements for firms hosting international students; programs that seek to generate a cultural shift such that placements both in and outside of curriculum become standard; and recognition and awards for industry-higher education partnerships. Ultimately, all stakeholders need to recognise the value of both curricula and co-curricula authentic learning experiences. Future work might involve Australian Vice Chancellors working in consultation with careers advisors to clarify the Fair Work Act and encourage increased collaboration.

Finally, whilst the immediate project has targeted its toolkit at educators who engage or are keen to engage with employability development, in the longer term the sector needs to “engage the disengaged”. Many educators do not see employability development as one of their responsibilities. In this respect, Professor Geoffrey Crisp (RMIT) advocated the need to rethink the areas of scholarship and focus within higher education, suggesting a fifth category for Boyer’s (1997) model of scholarship: namely, “that of employability and creativity, not just in theory but also in practice”. Sector-wide acceptance of an additional category would go some way towards positioning employability development as an integral part of higher education scholarship; however, for it to be embedded in higher education practice will require support at the school, faculty, institutional, sector-wide and governmental levels. In reality, this will occur only when higher education policy recognises and rewards quality higher education learning and teaching to the same extent as it does research.
References


Bennett, D., & Bridgstock, R. (2014). The urgent need for career preview: Student expectations and graduate realities in music and dance. *International Journal of Music Education.* Published online first at [http://ijm.sagepub.com/content/early/2014/09/29/0255761414558653](http://ijm.sagepub.com/content/early/2014/09/29/0255761414558653)


Enacting strategies for graduate employability


Enacting strategies for graduate employability


Appendix A - Student survey instrument

Clarification

It is important to note that this survey was delivered online using a dynamic delivery in which students were presented sets of items based on their responses to prior items. Thus, while the survey instrument appears long, no students were presented with all items.

Introductory text

Research background

This collaborative project responds to growing social and economic demands for graduates who can negotiate rapidly transforming employment contexts. We are seeking comprehensive and accurate responses, which will be treated with respect and confidentiality.

What does participation involve?

Participation is voluntary, and participants may freely withdraw from the study at any time without prejudice or negative consequences. Participation will comprise completion of a questionnaire that will take approximately 20 minutes.

Confidentiality

Your written responses are confidential: only the research project team will have access to these. This means that responses cannot be traced back to you in any documentation emerging from this research. Research documents will be secured in a locked cabinet, and computer data will be secured through the use of passwords in institutional IT systems. Lecturers and tutors will not have access to the responses of students.

Publication of results

The results may be drawn upon for academic papers and conference presentations. Individual information will not be included or identifiable in any way.

Queries

Please direct general queries about this study to Dr Sarah Richardson (esage@acer.edu.au) or Professor Dawn Bennett at dawn.bennett@curtin.edu.au

Ethics Committee Approval

This study has been approved by the Curtin University Human Research Ethics Committee, no. HURGS_02_14. If needed, verification of approval can be obtained either by writing to the Curtin University Human Research Ethics Committee, c/- Office of Research and Development, Curtin University, GPO Box U1987, Perth, 6845 or by telephoning 9266 2784.
There are 53 questions in this survey

**Introduction**

1 [INTRO2]
I have been informed of and understand the purpose of the study.

I have been given the opportunity to ask questions about the study and my participation.

I understand that I can withdraw my participation at any time without prejudice or negative consequences.

I understand that results will be published in the form of a report, academic papers and presentations. No information that might identify me will be used in published material.

Based upon the above information, please indicate your consent to participate in the study by completing the statement of consent below:

I agree to participate in this study, titled: Strategies Enhancing Graduate Employability (SAGE) *
Please choose only one of the following:

- Yes
- No

2 [INTRO3]
Unfortunately you cannot participate in this survey unless you agree to accept the ethics statement.

If you wish to change your mind, select 'yes' above

Otherwise, select 'next' to exit

**About my institution (university or TAFE)**

3 [UNI1]
I am attending ... institution
?
(What is the name of your university or TAFE?)
About my previous education

4 [PAST1]
I completed the previous education before starting my current course:
Please choose all that apply:
• High School
• TAFE
• University
• Other
? Select as many as relevant

5 [PAST2]
I finished high school in ...
? (which year?)

6 [PAST3]
I completed ... at high school
? e.g. VCE, International Baccalaureate, A Levels

7 [PAST4]
I finished TAFE in ...
? (Which year?)

8 [PAST5]
I studied ... at TAFE
? (e.g. certificate, diploma, ...)

9 [PAST6]
I finished my university course in ...
? (Which year?)

10 [PAST7]
I studied ... at university
? (e.g. bachelor degree in biology)

11 [PAST7]
I completed my course at the same university
Please choose only one of the following:
• Yes
• No

12 [PAST8]
I completed the following kind of education ...

13 [PAST9]
I completed my previous education in ...
? (Which year?)
14 [PAST10]
I completed my previous education at ...
? (Which institution?)

About my work experience

15 [WORK1]
I have the following work experience
  • None
  • Part time work
  • Full time work

16 [WORK2]
I did this work between ...
? (Start year and end year)

17 [WORK3]
I did the following type of work ...
? (Give a short description)

18 [WORK4]
On average, I worked this many hours per week ...

About me

19 [ME1]
My gender is ...
  • Female
  • Male
  • Transgender

20 [ME2]
I am ... years old

21 [ME3]
I am ...
  • Aboriginal or Torres Strait Islander
  • Non-Indigenous

22 [ME4]
My nationality is ...
  • Australian
  • Another nationality

23 [ME5]
My nationality is ...
Enacting strategies for graduate employability

24 [ME6]
My first language is ...
- English
- Another language

25 [ME7]
My first language is ...

About my parents

26 [PARENT1]
The highest level of education my parents have is ...
- Mother, father or both parents has a postgraduate qualification (Masters or PhD)
- Mother, father or both parents has a Bachelor degree
- Mother, father or both parents has a TAFE qualification
- Mother, father or both parents has completed high school
- Neither parents have completed high school
- I do not know

About me as a student

27 [STU1]
My degree programme is ...
?(e.g. bachelor of science)

28 [STU2]
My major or intended major is ...
?(e.g. chemistry)

29 [STU3]
I choose this major because ...
- I had a high enough ATAR score to be accepted
- I liked this discipline at school
- I think it will lead to an interesting career
- I want to have a high income in the future
- Other
?(Mark all that are relevant)

30 [STU6]
If 'other', please specify

31 [STU4]
I am currently in the ... year of my degree
- First
- Second
- Third
• Fourth
• Fifth
• Sixth
? (Which year?)

32 [STU5]
I am studying ...
• Full time
• Part time

33 [STU6]
I expect to do further study after I finish my current degree
• Yes
• No

About me in the future (1)

34 [FUT1]
Three to five years after graduation I HOPE to be doing ..... ? (eg working as a ..., studying for a PhD, ...)

35 [FUT2]
I think that employers look for the following things in graduates ...
? (List as many things as you can think of)

36 [FUT3]
A professional in my major's study area has the following characteristics ...
• 1
• 2
• 3
• 4
• 5
• 6
? (List at least three characteristics)

37 [FUT5]
I see the following differences between me as a person and these professional characteristics (the ones you listed above)
• 1
• 2
• 3
• 4
• 5
• Other
? (List as many as you can think of)
38 [FUT6]
The strategies I plan to use to develop these characteristics are ...

39 [FUT7]
The timeframe for these strategies is ....
? (e.g. in the next six months)

40 [FUT4]
I used the following information sources to come up with the characteristics of a professional in my major’s study area ....

• My parents
• My family
• My friends
• My school
• Teaching staff at my university or TAFE
• Internet
• Other
? (Choose all that are relevant)

41 [FUT14]
If 'other', please specify

About me in the future (2)

42 [FUT12]
Three to five years after graduation I EXPECT to be doing the following ...
? (Give a description of what you expect your life to be like)

43 [FUT8]
What I learn in my degree will prepare me for my future work and career in the following ways ....

• 1
• 2
• 3
• 4
• 5
• Other
? (List as many as you can think of)

44 [FUT11]
[This item replicates one in the AUSSE instrument and was shared with the research team by the Australian Council for Educational Research]
In my experience at this institution in the current academic year, I have talked about my career plans with teaching staff or advisors ...

• Never
• Sometimes
• Often
• Very often

45 [FUT9]
In 15 years time I EXPECT to be doing the following ...
? (Give a short description of what you expect your life to be like)

Professional identity
The items in this section were developed by Adams, Hean, Sturgis and Clark (2006) for use with higher education students.

46 [IDENT1] I have a clear idea of what I am studying to become (i.e. the professional role I am likely to have in the future)
• Yes
• No

47 [IDENT2]
Thinking about this professional role – referred to here as ‘this profession’ – please indicate how much you agree with the following statements

Please choose the appropriate response for each item:
• Strongly disagree
• Disagree
• Not sure
• Agree
• Strongly agree

— I feel I have strong ties with members of this profession
— I feel like I am a member of this profession
— I am often ashamed to admit that I am studying for this profession
— I find myself making excuses for belonging to this profession
— I try to hide that I am studying to be part of this profession
— I am pleased to belong to this profession
— I can identify positively with members of this profession
— Being a member of this profession is important to me
— I feel I share characteristics with other members of the profession

48 [IDENT3]
Thinking about graduates who have done the same degree as you please indicate how much you agree with the following statements

Please choose the appropriate response for each item:
• Strongly disagree
• Disagree
• Not sure
• Agree
• Strongly agree

— I feel I have strong ties with those who have done the same degree as me
— I feel like I am a member of a community of those who have done the same degree as me
— I am often ashamed to admit that I am doing this degree
— I find myself making excuses for doing this degree
— I try to hide that I am doing this degree
— I am pleased to belong to the group of people who have done the same degree as me
— I can identify positively with others who have done the same degree as me
— Being a member of the group of graduates who have done the same degree is important to me
— I feel I share characteristics with others who have done the same degree as me

Managing career and work life

The items in this section were kindly shared with the research team by the Ithaca Group (nd). They were developed as a self-assessment questionnaire for the Core Skills for Work Framework but have not been published.

49 [MANAGE1]

When I think about identifying career and work options, I ...

• Could use some advice to see where my interests and experience fit into the world of work
• Can see some work options that suit me, but would benefit from some further advice
• Draw on my personal skills and interests and familiar processes to develop my career and address barriers and skill gaps where I can
• Balance my circumstances, experience, skills, goals and options with the complexities of the world of work, seeking trusted advice if required
• Manage the ongoing complexities of long term career development through personal reflection and response to actual and potential changes

? Select all that are relevant

50 [MANAGE2]

When it comes to finding work I ...

• Can see what’s required for some jobs, but need some help with how to apply for work
• Can find and apply for suitable job opportunities using a few familiar job-finding and application techniques
• Am comfortable with finding job vacancies and can present my skills and experience in relation to job requirements
• Have developed broad job seeking skills and use contacts and networks to advance my career
• Successfully rely on my experience, reputation and established networks to identify opportunities where my interests and skill set are a strong match with the potential role

? Select all that are relevant

51 [MANAGE3]
In order to develop the relevant skills and knowledge required for my work and career, I...
• Participate in training for my role when it is offered but am not always confident in asking for help
• Take steps to develop skills and qualifications for my role and sometimes ask for feedback on my work
• Use both formal and informal learning to develop my skills and knowledge for my role and am starting to recognise the importance of on-going learning
• Regularly use feedback and self-reflection to improve my performance and set my own learning challenges in order to develop my career path
• Continually reflect on my performance and seek and use feedback as an integral part of my work, and I have innovative ways of managing my own learning and contributing to the learning of others

? Select all that are relevant

Conclusion

52 [FUT13]
Finally, I would like to give the following feedback on my current degree and how it is helping me prepare for my future work and career ...

53 [FUT15]
Thank you very much for taking the time to respond to these questions.
Thank you for your participation.

Thank you for completing this survey.

References

Ithaca Group (nd). Unpublished resource content developed by Ithaca Group and funded by the Commonwealth Government.
Appendix B - Case study instruments

Student case study questions

Female □ Male □ Undisclosed □

1. Icebreaker: Thanks for coming along. Can you tell me what you’re studying, how far through the course you are, and when you hope to complete?

Major: Year: Full/part time: Finish year:

2. To what extent do you feel that your course will prepare you for work and employment? (Open question)

3. Do your expectations align with the information which (institution) gave you before you started your course? Y □ N □ (If not, what are the differences?)

4. When you finish your degree, will you be able to commence your chosen career? Y □ N □

5. If no, what strategies will you use to improve your employability?

6. When will you make the decision to adopt these activities?

7. What will you gain from them?
8. What do you expect your working life to look like when you graduate? *(What do you expect to be doing; how do you know?)*

9. When you apply for work as a graduate, what do you think employers/clients will be looking for? *(What would prompt someone to choose you?)*

10. Which of these aspects do you not yet have?

11. What are your strategies for developing them?

12. What evidence of employability do you think employers look for among graduates in your discipline, and do you have some ideas about how to develop this evidence?

13. Can you tell me about the opportunities for work experience or developing employability within your course?

14. Other than your degree, what things have you done to enhance your employability? *(e.g. other study, informal learning, work experience)*

15. Coming back to the first question, which was about what employers look for, could you rate these competences in order of the importance an employer would place on each?

16. How would you rate yourself against each of these?
### Ratings for question 15

<table>
<thead>
<tr>
<th>Competence</th>
<th>Examples</th>
<th>Not important</th>
<th>Somewhat important</th>
<th>Important</th>
<th>Very important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intellectual curiosity</td>
<td>Seek and use feedback</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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<td></td>
<td>Open to new and diverse people and ideas</td>
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<td></td>
<td>Possess a certain amount of social intelligence</td>
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<tr>
<td>Strategic insight</td>
<td>Insightful, see things from new angles</td>
<td>1</td>
<td>2</td>
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<td></td>
<td>Demonstrate strategic thinking</td>
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<td></td>
<td>Display broad insight into the organization's business and one's own role in its goals</td>
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<td></td>
<td>Possess a &quot;helicopter view&quot; (multidisciplinary)</td>
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<td></td>
<td>Intelligent (possess certain analytical capacities)</td>
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<td></td>
<td>Reflect critically on practices and procedures</td>
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<td>Decision making</td>
<td>Decisive</td>
<td>1</td>
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<td></td>
<td>Able to make decisions rapidly</td>
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<td>Assertive</td>
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<tr>
<td>Problem solving</td>
<td>Able to solve problems well and quickly</td>
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<td>2</td>
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<td></td>
<td>Possess problem-solving skills</td>
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<td>Able to cope with complexity</td>
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<td>Willingness to learn</td>
<td>Open to learning</td>
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<td></td>
<td>Chase after variety, challenges, and intellectual stimulation</td>
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<td></td>
<td>Seek out opportunities to learn</td>
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<td></td>
<td>Eager to learn about self, others, and ideas</td>
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<td>Display self-management to foster learning and high performance</td>
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<td>Enjoy complex problems and challenges with new experiences</td>
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<tr>
<td>Emotional intelligence</td>
<td>Able to deal with stress and ambiguity</td>
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<td></td>
<td>Demonstrate independence</td>
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<td>Demonstrate emotional intelligence</td>
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<td>Self-confident</td>
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<td>Adaptability</td>
<td>Self-aware of strengths and weaknesses</td>
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<td></td>
<td>Feel comfortable with turbulent change</td>
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<td>Not be afraid to take risks</td>
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<td>Show adaptability</td>
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<td>Demonstrate flexibility</td>
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<td>Change-oriented</td>
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<td>Proactive</td>
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<td>Display personal flexibility and mobility</td>
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<td>Self-promotion/</td>
<td>Enhance visibility (ensure work is noticed by significant others)</td>
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<td>Promotion</td>
<td>Communicate strategically</td>
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<td>Build up professional credibility (get results noticed)</td>
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<td>Demonstrate influence skills</td>
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<td>Know how to “sell” ideas</td>
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<td>Have cogency (be able to present strong arguments)</td>
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<td>Generate an impact</td>
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<td>Use, and not abuse, power</td>
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<td>Convey a vision, inspire, be charismatic</td>
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<td>Perseverance</td>
<td>Display high levels of energy</td>
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<td>Show drive and perseverance</td>
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<td>Persevere under adverse conditions</td>
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</table>

Enacting strategies for graduate employability
| Dedication | Do more than just “carry out a job”  
Demonstrate high dedication to the work  
Demonstrate intrinsic motivation (i.e., for the work in itself)  
Passionate  
Committed to making a difference  
Assume responsibility/accountability  
Have an internal locus of control (control over events to oneself)  
Display ambition, want to grow  
Take initiative | 1 | 2 | 3 | 4 |
|-------------|-------------------------------------------------|-----|-----|-----|-----|
| Motivated to lead | Show commitment  
Be credible (honest and ethical)  
Manage self and others  
Manage own work and learning  
Motivate others  
Delegate decision-making to those best-suited (empowerment)  
Direct others  
Build high-performing teams  
Display leadership ability  
Actively look for opportunities to lead  
Set clear objectives | 1 | 2 | 3 | 4 |
| Results oriented | Seize opportunities when they present themselves  
Quality-driven  
Demonstrate need for achievement (performance-oriented)  
Competitive  
Consistently deliver tangible, measurable results above expectations  
Demonstrate a drive for results | 1 | 2 | 3 | 4 |
| Stakeholder sensitivity | Have a focus on the customer and the market  
Have good interpersonal skills | 1 | 2 | 3 | 4 |
Enacting strategies for graduate employability

<table>
<thead>
<tr>
<th>Competence</th>
<th>Examples</th>
<th>Not at all</th>
<th>Somewhat</th>
<th>Largely</th>
<th>Completely</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intellectual curiosity</td>
<td>Seek and use feedback</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Open to new and diverse people and ideas</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Possess a certain amount of social intelligence</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Strategic insight</td>
<td>Insightful, see things from new angles</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Demonstrate strategic thinking</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Display broad insight into the organization’s business and one’s own role in its goals</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Possess a “helicopter view” (multidisciplinary)</td>
<td></td>
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<tr>
<td></td>
<td>Intelligent (possess certain analytical capacities)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Reflect critically on practices and procedures</td>
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<tr>
<td>Decision making</td>
<td>Decisive</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Able to make decisions rapidly</td>
<td></td>
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<tr>
<td></td>
<td>Assertive</td>
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<td>---------------------------------------------------------------------------</td>
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<tr>
<td>Problem solving</td>
<td>Able to solve problems well and quickly</td>
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<tr>
<td></td>
<td>Possess problem-solving skills</td>
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<tr>
<td></td>
<td>Able to cope with complexity</td>
<td></td>
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<tr>
<td>Willingness to learn</td>
<td>Open to learning</td>
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</tr>
<tr>
<td></td>
<td>Chase after variety, challenges, and intellectual stimulation</td>
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<tr>
<td></td>
<td>Seek out opportunities to learn</td>
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<tr>
<td></td>
<td>Eager to learn about self, others, and ideas</td>
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<tr>
<td></td>
<td>Display self-management to foster learning and high performance</td>
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<tr>
<td></td>
<td>Enjoy complex problems and challenges with new experiences</td>
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<tr>
<td>Emotional intelligence</td>
<td>Able to deal with stress and ambiguity</td>
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<tr>
<td></td>
<td>Demonstrate independence</td>
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<tr>
<td></td>
<td>Demonstrate emotional intelligence</td>
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<tr>
<td></td>
<td>Self-confident</td>
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<tr>
<td></td>
<td>Self-aware of strengths and weaknesses</td>
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<tr>
<td>Adaptability</td>
<td>Feel comfortable with turbulent change</td>
<td></td>
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<tr>
<td></td>
<td>Not be afraid to take risks</td>
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<tr>
<td></td>
<td>Show adaptability</td>
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<tr>
<td></td>
<td>Demonstrate flexibility</td>
<td></td>
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<tr>
<td></td>
<td>Change-oriented</td>
<td></td>
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<tr>
<td></td>
<td>Proactive</td>
<td></td>
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<tr>
<td></td>
<td>Display personal flexibility and mobility</td>
<td></td>
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<tr>
<td>Self-promotion/Promotion</td>
<td>Enhance visibility (ensure work is noticed by significant others)</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Communicate strategically</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td></td>
<td>Build up professional credibility (get results noticed)</td>
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<tr>
<td></td>
<td>Demonstrate influence skills</td>
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<tr>
<td></td>
<td>Know how to “sell” ideas</td>
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<td></td>
<td>Have cogency (be able to present strong arguments)</td>
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</tbody>
</table>
| Perseverance | Generate an impact  
Use, and not abuse, power  
Convey a vision, inspire, be charismatic |
|-------------|-----------------------------------------|
|             | Display high levels of energy  
Show drive and perseverance  
Persevere under adverse conditions |
| Dedication  | Do more than just “carry out a job”  
Demonstrate high dedication to the work  
Demonstrate intrinsic motivation (i.e., for the work in itself)  
Passionate  
Committed to making a difference  
Assume responsibility/accountability  
Have an internal locus of control (control over events to oneself)  
Display ambition, want to grow  
Take initiative |
| Motivated to lead | Show commitment  
Be credible (honest and ethical)  
Manage self and others  
Manage own work and learning  
Motivate others  
Delegate decision-making to those best-suited (empowerment)  
Direct others  
Build high-performing teams  
Display leadership ability  
Actively look for opportunities to lead  
Set clear objectives |
| Results oriented | Seize opportunities when they present themselves  
Quality-driven  
Demonstrate need for achievement (performance-oriented) |
| Stakeholder sensitivity and communication | Competitive  
Consistently deliver tangible, measurable results above expectations  
Demonstrate a drive for results |
|------------------------------------------|--------------------------------------------------|
| Technical skills and knowledge in or related to the discipline | Have a focus on the customer and the market  
Have good interpersonal skills  
Build long-term relationships with clients  
Possess networking skills (to build organizational relationships)  
Adapt communication style and content to an audience |
| Technical skills and knowledge in or related to the discipline | Apply comprehensive theory-based understanding to complex problems and broader aspects of practice  
High level of current technical expertise relevant to work areas  
In-depth knowledge and skills in at least one specialist domain  
Aware of the structure and characteristics of work  
Aware of the social, cultural, environmental, commercial, legal and political contexts of work  
Aware of the codes of practice, legislative and statutory requirements and health and safety responsibilities of work  
Employ ICT to communicate and perform key work functions |

| Stakeholder sensitivity and communication | Have a focus on the customer and the market  
Have good interpersonal skills  
Build long-term relationships with clients  
Possess networking skills (to build organizational relationships)  
Adapt communication style and content to an audience |

| Technical skills and knowledge in or related to the discipline | Apply comprehensive theory-based understanding to complex problems and broader aspects of practice  
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| Stakeholder sensitivity and communication | Consistently deliver tangible, measurable results above expectations  
Demonstrate a drive for results |
|------------------------------------------|--------------------------------------------------|
| Technical skills and knowledge in or related to the discipline | Apply comprehensive theory-based understanding to complex problems and broader aspects of practice  
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Aware of the social, cultural, environmental, commercial, legal and political contexts of work  
Aware of the codes of practice, legislative and statutory requirements and health and safety responsibilities of work  
Employ ICT to communicate and perform key work functions |
Graduate case study questions

Demographics: Female □  Male □  Undisclosed □

1. Icebreaker: Thanks for coming along. Can you tell me about your study and work experience?
   Please note: Work: Year/s: Place/s: Occupation/s
   Please note: (Prompt: Can you tell me about any studies you have done since graduating?)
   Program/s Completed Y/N Place/institution Year/s Benefits/learning/impact

2. When you graduated, did you expect to be working as you are now? (What did you expect to be doing?)

3. If no: What did you expect work to look like and how did it differ in reality?

4. As a student, where did you get information about career and what work would look like?

5. Are you likely to continue in this career, or might you change?

6. Did your expectations of work and career align with the information your institution gave you before you started your course?
   Y □  N □ (If no: What were the differences?)

7. To what extent do you feel your course prepared you for work and employment?

   Not at all  |  Somewhat  |  Mostly  |  Completely
   1          |  2         |  3       |  4

8. When you started your undergraduate degree, did you have an idea of what you wanted to do for a career? (If so, what was this?)

9. Did this change during your degree? Y □  N □
   If yes: What prompted this change?
10. When you finished your degree, were you able to commence your chosen career?

Y □ N □ Open question. Try to capture the following:
• What were employers / clients looking for?
• As a graduate, which of these did you not have?
• What strategies did you use to improve your employability?
• When did you realise or decide to adopt these strategies?
• What did you gain from them?

11. During the years you were studying, what experiences contributed most to:
• Your understanding of work and career?
• Improving your ability to pursue your career? (Prompt – work experience, volunteering, WIL, within and outside the course)

12. As a student, were you aware of opportunities at your institution to enhance your employability? Y □ N □

• If yes: Did you take up any of these?
• With hindsight, were there opportunities you regret not having taken?

13. Other than your degree what things did you do to enhance your employability, and what impact did they have?

14. What outstanding attributes do employers/clients look for in a graduate? (Job-specific skills knowledge/experience/personality/other?)

• What gets them an interview?
• What should applicants bring to an interview, to prove they can do what they say they can do?
• Do you have some ideas about how they could develop evidence? (May mention research, internships, volunteer work, graduate career panels, career development classes, counselling etc.)

15. Refer to the attached ratings scale for this question.

16. Finally, is there anything else you need to tell me about being prepared for work and gaining employment?

17. How important are these competences? (same table as before)
Leader case study questions

1. On a scale of 1 - 4 with 1 being not at all and 4 being completely, to what extent do generalist undergraduate courses prepare students for work and employment?

<table>
<thead>
<tr>
<th>Not at all</th>
<th>Somewhat</th>
<th>Mostly</th>
<th>Completely</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

2. To what extent should the information given to potential students address the realities of work and career in their field of study?

<table>
<thead>
<tr>
<th>Not at all</th>
<th>Somewhat</th>
<th>Mostly</th>
<th>Completely</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

3. What should HEIs already be doing to make courses relevant to the employability of their graduates?

4. In general, how realistic/aware are undergraduate students about the realities of work and career in their field of study?

<table>
<thead>
<tr>
<th>Not at all</th>
<th>Somewhat</th>
<th>Mostly</th>
<th>Completely</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

5. Whose responsibility is graduate employability?

6. What do employers look for in graduates?
i. To what extent do you develop these traits at your institution?

ii. What more could realistically be done across the HE sector?

iii. What are the impediments for institutions?

7. In terms of developing employability:
   
   b. In an ideal world, what strategies would you like to see in every undergraduate program?

   c. Realistically, what more could be done now?

   d. What are the impediments?

Thinking now about the support structures for staff:

8. What structures and strategies are needed to ensure that staff can and will develop employability and career awareness?

   a. Realistically, what more could be done now?

   b. What are the impediments?

9. Is there anything else you would like to say about developing employability among undergraduate students?

10. Please rate the following competences in order of the importance an employer would place on each:

    How important are these competences? (same table as before)
Careers advisor case study questions

1. When and why do students currently access career services at (institution)?

2. Is this as you would like it, or would you like changes?

3. How do you see university-based career services changing over the next 10 years?

4. What is driving those changes?

5. If you had the ability to completely reshape career services in higher education, what would you do?

6. What are the impediments to this?

7. What could be done now, and how could we make it happen?
Appendix C - Case study sample

<table>
<thead>
<tr>
<th>Location</th>
<th>Graduates</th>
<th>Students</th>
<th>Leaders</th>
<th>Careers advisors</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL</td>
<td>23</td>
<td>22</td>
<td>13</td>
<td>2</td>
</tr>
<tr>
<td>New South Wales</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>15</td>
<td>1</td>
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<tr>
<td>Western Australia</td>
<td>12</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Queensland</td>
<td>4</td>
<td>6</td>
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<tr>
<td>Victoria</td>
<td>4</td>
<td>10</td>
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<td>1</td>
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<tr>
<td>Overseas</td>
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<td>Northern Territory</td>
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</tr>
<tr>
<td>South Australia</td>
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<td>Gender</td>
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<td>11</td>
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<td>Male</td>
<td>9</td>
<td>11</td>
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<td>Broad field of education</td>
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<td>Performing Arts</td>
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<tr>
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<td>Creative Arts</td>
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<td>Information technology</td>
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<tr>
<td>General</td>
<td>8</td>
<td></td>
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<td>2</td>
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</table>
Appendix D - Interventions that enhance student and graduate employability

As part of the research phase of the project we conducted a search of university web sites to identify way interventions which are used by universities to improve graduate employability. Common approaches identified by this approach and in the literature on employability include:

- **Extra- or co-curricular activities**: support and/or recognition of volunteering roles, peer-assisted study or learning, and leadership roles in community groups (for example, see [http://www.employability.ed.ac.uk/Student/EdinburghAward/](http://www.employability.ed.ac.uk/Student/EdinburghAward/))

- Explicit support for finding graduate employment: e.g. how to write an application for work; practice interviews; access to employers and/or job listings;

- **Work integrated learning** incorporating formal and informal, real or simulated s in the shape of credit- or non-credit awarding activities (for example see, Xia, Caulfield & Fern, 2014; Smith Ferns & Russell, 2014; and for a specific example see [http://www.rmit.edu.au/industry/student-work-placements](http://www.rmit.edu.au/industry/student-work-placements)); and

- Programs that develop skills such as teamwork, understanding of workplaces through case studies, and problem-based learning (for example, see Shen & Ooi (2013), Shen Buskes Evans & Ooi (2011); see also Mason et al (2009) for a detail evaluation of intervention effectiveness)

**Examples of employability services offered by universities in Australia and internationally**

**Bond University: Beyond Bond**
Run by the Career Development Centre, this program is designed to prepare students for the transition from academic study to employment and covers areas such as Work/Life Balance, Stress Management, Career Planning, Financial Management and others

**Deakin University’s Job Shop**
The Job Shop is Deakin University’s career web resource. It has an online employment service cover student part-time jobs through to graduate positions. It also offers support services for the recruitment process and for career planning.

**La Trobe University’s Career Ready program**
This provides information on career planning and employability skills development.

**RMIT University’s LEAD program**
The LEAD program assists students gain experience through co-curricular opportunities mainly through volunteering roles within the university. It is accredited and can lead to a certificate issued by the University.

**The University of Western Sydney’s CareervUWS**
The vUWS is a online suite of career modules covering; career preparation; work placement preparation; career management; and graduate employment. It also has a series of modules
on workplace resilience. The modules can be incorporated into the curriculum or taken as a co-curricular activity.

**The University of Melbourne’s Skills towards Employment Program (STEP)**
STEP is a compulsory hurdle for all engineering students. It assists students developing generic skills including communication, teamwork, project management and leadership. Students demonstrate their skill proficiency using ePortfolio.

**The University of Melbourne (2015). School of Engineering Industry Based Learning elective**
The link is to the 2015 Subject Handbook Entry. This is an example of a subject based around a WIL project. Assessment is through reflective writing and presentations, and a final report of 8,000 words.

**The University of Nottingham (2015). Advantage Award.**
This is an extra-curricular structured accredited program consisting of about 160 modules. The modules are provided by a variety of organisations, including employers. They develop employability skills such as leadership.

**The University of the West of England (2014). Careers services.**
This is another example of a university careers service, providing in person and online assistance to students. It also has an online job vacancy board. There is a employment placement program allowing students to gain work experience during their studies.

**Examples of university support for graduates in the years immediately after graduation**

**University of Warwick Services for alumni**
All alumni with free access to its careers service for up to three years after graduation. Support includes appointments with careers consultants, checking CVs and applications, online support, mock interviews, careers skills workshops and access to careers fairs.

**University of the West of England alumni support**
Services similar to Warwick are offered to alumni. In addition, there is support and funding to start new businesses.

**Examples of university programs to effect organisational change to enhance the teaching of employability skills to students**


**Mobility programs**
Greater mobility between industry and academia was a dominant theme throughout the case studies. Notable mobility programs include study programs such as the European
Union’s *Industrialised Countries Instrument - Education Cooperation Programme*, which enables students to study in a partner country (including Australia).

They also include research-industry partnership programs such as the Australian Research Council’s *Linkage Grants* and, in Europe, funding for *Public Private Partnerships in Research*. Versions of these programs are also seen at most higher education institutions; however, at every level they appear to ignore learning and teaching.

The Office for Learning and Teaching might consider a new “Linkage” program focussed on learning-industry linkages that benefit both educators and students through industry exposure. It is likely that such a program would be of interest in the European Union, where there are similar discussions about employability.
Appendix E - Case study vignettes

Australian trumpeter Danielle Rich
Prepared by Dawn Bennett

Dani’s story

“Find out who you are and what you want, then grab every opportunity”

Dani Rich describes herself as someone “working and living” her life as a musician. After starting with the clarinet in high school she fell in love with the trumpet, and in 2010 she completed a performance degree at the Queensland Conservatorium.

This led to a Master’s degree in England, but the decision to pursue music at the professional level was far from simple. Dani describes 18 months of doubt following the completion of her degree:

I was feeling the pressure of what to do, and put my trumpet in its box for a little while. I worked – well, I taught music and worked in cafes and bars and in a law business and that kind of thing – just to see if actually I wanted to come back to trumpet, because it’s such a big commitment and I wasn’t really ready to put all my eggs in one basket.

Identity formation

What Dani describes is an essential stage of personal and professional identity formation: she challenged her identity. Careers in music are complex, and managing such complex careers requires self-efficacy (a belief in your own ability), professional self-concept (knowing how you feel about yourself as a musician) and self-regulation (the ability to regulate activities and decisions). This is hard to achieve for someone who hasn’t yet thought about who they want to be, both as a musician and an individual.

Maybe 1 or 2% of music students come with a realistic goal. ... Take the time to work out what you want

The stages of identity development can be described in many ways, and Figure 1 illustrates a simple way of thinking about it using Marcia’s (1966) four stages of identity development. Identity transitions are often inspired by uncertainty. They are normal and healthy, because identity is an ongoing process that lasts a lifetime! Dr Kate Byerwalter of Grand Rapids Community College created this short video on identity development. In the video, Kate explains identity stages and transitions in simple terms that professionals, educators and students can understand.

Identity moratorium

Dani’s recognition that she wasn’t sure whether to commit to a career in music led her to identity moratorium. By challenging her identity, she eventually reached the stage of
identity achievement whilst remaining open to new opportunities. This gave her new energy: “I know it’s really what I want to do now”.

Having made her decision, Dani asked her trumpet teacher for recommendations of great teachers around the world, and then she set off to do auditions and to take lessons. The result was an audition for the Master’s Degree at the Royal Northern College of Music in Manchester, England, and Dani had to find ways of meeting the high cost of studying in the UK. Again, she was pro-active:

I discussed [with the teacher in Manchester] how I might afford it and he really helped me to get a scholarship from the college. ... I don’t think I could have been able to do it otherwise. Then, for the next eight months I just worked and practised and saved as much money as possible, and then I moved to Manchester.

The four identity states

![Image of the four identity states diagram](image)

**Figure 1:** The four identity states, drawn from Marcia (1966)

Having made the commitment to pursue music, Dani took every opportunity: “when I was doing my Master’s degree I was really doing it properly – taking every opportunity rather than letting things come to me”. The casual work with Opera North and two professional access schemes – internships – were new programs when she undertook them. Her message to current students is to “grab every opportunity to get experience”:

*In Amsterdam there was a pilot scheme with the Netherlands Wind Ensemble and they sent three of us there for two weeks to play in the ensemble and go on tour with them. They liked us a lot so they asked us back for their New Year’s concert.*
They were fantastic – that was probably one of the highlights of the two years as the ensemble is completely different to any ensemble I’d ever worked with before. ...
As well it was really great to be able to play in Europe and see what the scene is like there. ... You have to be ready for the opportunities when they are thrown at you and then you just make it work.

She also advises students to watch, listen and learn to play as much and as varied orchestral, chamber and solo repertoire as you can. You need to educate yourself on as many styles and sounds as possible, not just on your own instrument.

Audition for everything possible. ... Grab every opportunity to get experience

Reflecting on the decision to move away from Australia, Dani is certain that broadening her experience was a positive move:

I’m a much better trumpet player and I more confident in my ability and choices. It’s easy to get comfortable – I have lived in Brisbane for most of my life and all my study was in Brisbane, and it’s easy to accept that this is all you could be. You really have to push yourself to go and find things that make you work harder. People can find that kind of motivation in different places, for me I needed to go overseas and get out of my comfort zone for a while

Transition to becoming a musician

Looking back, Dani talks frankly about her transition to becoming a musician. Her comments highlight that university students often to study music because of their love for it; only later do they recall and understand advice given to them before they were ready to challenge their identities as musicians:

I don’t think I had any idea what it was like to be a trumpeter ... I just did it because I wanted to play the trumpet. It wasn’t all I could do – I studied hard and got good grades – but I really wanted to play the trumpet! My teacher at the time was trying to make me more aware of the realities: ‘it’s not like you just get to play the trumpet and someone pays you!’. But I didn’t understand what he was talking about really. Then I can to the Con and everyone was saying ‘there’s no work’ – there’s this kind of vibe everywhere you go because it’s true.

But now I have made that decision, I don’t think I would be happy doing anything else. So that’s what I’m going to do. I don’t mind if I have to work other jobs to support my main goal, as long as I can make my playing my main thing and eventually get a job.

Dani’s ultimate goal is “To play first trumpet in an orchestra somewhere in the world. It doesn’t matter where”. She is now actively auditioning, so based on her experience in Australia and Europe we asked what orchestras look for when auditioning players.

Someone who makes a good sound, plays in tune and in time – that’s what everyone wants to hear. But also, you have to do something special to show yourself. They’re looking for an understanding of your repertoire and an
I worked it out by just talking to people. That was one of the great things about Manchester – any day of the week you can go and talk with the trumpet staff as they have their coffee! Not enough people take advantage of that, to just go and chat … but as a nice person, you don’t want to be seen as too pushy.

As a graduate I wasn’t ready to go out and win a job. I’m still not, but I’m very much closer

Aspexing strategies for graduate employability

Enacting strategies for graduate employability
the text of a song means... and getting involved in the music industry as much as possible. They need to find a way of liking the things they do, even if it’s not playing the trumpet! I don’t know how that can be communicated to students because it also relies on them being proactive. And students need to learn how to work to the tight schedules of a professional orchestra where there’s a new program every week or two. That’s really tough to learn on the job.

Higher music education students need to explore their future lives in music, creating expert selves that are sustainable over the career lifespan. For Dani the next year includes work with the Queensland Symphony Orchestra before heading back to Manchester for further lessons and work with Opera North, and to take advantage of the proximity to Europe and increased opportunities. She is determined to achieve her goals and she is a young musician to watch!

Students need to understand the broader relevance of their degree: what it is giving you and why you’re studying it.
Developing your personal brand
Prepared by Sarah Richardson

Sue’s story

As a performer, you can’t just go on a stage and play any more; it’s not about that ... You can’t be narrow minded and just focus on your discipline, that’s not what employers want any more in any field

Sue* graduated with an honours degree in music performance in 2006. Her main instrument is clarinet* but she also plays a number of other instruments. Sue is currently the manager of a regional orchestra, a position she has held for several years. She also performs both in the orchestra and in a number of ensembles.

In her management role she manages all activities of the orchestra from arranging the logistics of performances, recruiting guest artists, carrying out marketing and communication activities and coordinating events. She acknowledges:

I was never expecting to be in a management role of an orchestra, I think I was expecting to do a lot more teaching and a lot more playing but I guess it was a personal situation that took me away from that and then I had to find other work just by chance

After graduation, and before starting her current job, Sue spent several years in a number of teaching roles both in metropolitan and regional areas. She completed a Graduate Diploma of Teaching and Learning once it became a formal requirement for music teachers and taught in a number of different schools, as well as taking on private pupils. In addition to teaching she was actively involved in accompanying choirs and established an ensemble with friends from her course, giving regular performances.

The narrow experience of a music degree

Thinking back to her degree, Sue feels that educators had very narrow assumptions about what graduate would do. She suggests that educators did not consider the range of professions which those with a performance background could go into, from arts management to music administration to music therapy.

Because the focus of educators was so narrow, students didn’t know that these were options and weren’t able to gain the skills required. She recalls

It was communicated ... if you were good enough you would be a performer, if you weren’t good enough you would be a teacher ... but you could be one of the top people and you won’t get an orchestral job and therefore if you haven’t had any experience in teaching or if teaching has been made to seem like it’s a second option, then what do you do?

* Details changed to protect anonymity of research participant
Learning from life

Because Sue’s course included no information on careers beyond music or teaching, she had had to learn the skills and knowledge to do what she is doing now through informal channels. She comments on her learning as coming from:

*Life experience ... talking to other people and learning and reading ... what I’ve done within my job ... I’ve had to fly by the seat of my pants and take on board ... meetings and networking, reading – a lot of reading about other organisations and their models and structures, contact with board members, some professional development workshops, mostly around conflict management and dealing with people*

Good at performance, bad at communication

Now Sue is in a position where she is involved in appointing other music graduates, both to performance roles and also to other roles, including education and outreach. She finds that many music graduates lack the broad range of skills that are required.

She also reports that some people who are great performers have very poor communications skills, and this can mean that they are not considered for jobs beyond performance alone. As she recalls from a recent interview:

*the best candidate in terms of playing did the worst interview because they just spend their lives playing and then when it comes to having to have a change of career, or looking for a different option, because they don’t want to just play anymore, they don’t have the skills ... we can assist her but not all workplaces are going to be that accommodating*

Developing your own brand

Looking back at how her career has evolved, Sue feels that it is essential that graduates from performance degrees develop their own brand. She thinks there is a perception that you just perform and that is enough. As she suggests

*It’s not just about being able to play the instrument; in fact it’s even not about that anymore, because there’s so many people who can play the instrument ...*

Instead, Sue suggests that all performers need to be able to market themselves, sell their skill sets, network, communicate well. Most of all, she encourages all performers to develop a presence on social media.
Developing your personal brand

There are now numerous resources available to help people build their own brand. They all tend to highlight the same key steps. As you read through each one, try to work out what your personal brand is:

**Identify your unique selling proposition** – What is it about you that makes you stand out from others? What do you want to be known for? What do you want to achieve?

**Identify your target market** – Who are you trying to communicate to? Which groups of people will be critical to you in developing your career?

**Identify your communication mediums** – Think about your target market and identify which communication mediums are most likely to reach them – be specific e.g. not just ‘social media’ but which forms?

**Get attention** – Lots of people communicate with others. What can you do to make yourself stand out and get noticed?

**Find mentors** – most of us need people who will give us advice as we launch or develop our careers. What kind of mentors do you need? Who could you approach?

**Creative approaches** – what are some other ways that you could develop your personal brand? Think of approaches that would be particularly appropriate in your desired career.

Support for this project has been provided by the Australian Government’s Office for Learning and Teaching. The views expressed in this publication do not necessarily reflect the views of the Australian Government Office for Learning and Teaching.
Kristy’s story

“Pursuing an interest can make finding a career to fit that interest challenging”.

Kristy completed a double degree in visual arts and Arabic in 2010. In deciding to do this degree, Kristy followed her interests rather than worrying too much about a career. Kristy discovered that career options are not as obvious for graduates of general degrees than those of professional degrees.

Universities may give students a list of potential jobs they can pursue after their general degree, but getting one of these jobs may not be easy or the pathway to it may not be obvious.

As she progressed through her degree, Kristy became increasingly concerned about what she would do when she finished. She spoke to one of the university’s career’s advisers about options: what she expected was a list of jobs that she would be qualified for and would be able to apply for when she finished.

She got that, but found it wasn’t that helpful. There was no clear pathway from her degree into any of the jobs on the list. As Kristy said, that

*The fact that I was doing a general degree meant I didn’t fit into any box or career path ... you feel like you are on your own when it comes to finding a job.*

Kristy response was to seek more advice, including from older trusted friends, her parents, and from academic staff at her university.

From academics she learned that the most reliable income for people working in visual arts was from education and doing visual arts on the side.

Kristy was advised to get more experience through doing voluntary work—she visited an elderly lady once a week. She found the experience profound and it helped her decide what direction her career should take.

During her studies Kristy got extra experience through studying in Jordan for eight weeks. This helped her enormously with her Arabic language skills, which proved important for her employability, as she subsequently did an internship with a publisher in Dubai.

The internship turned out to be useful in showing what she wasn’t interested in. She was involved in page lay-out in the internship, something she didn’t much enjoy.

When Kristy graduated, she applied to do a Masters of Art Therapy, but was told at her interview to get at least a year’s more experience in working with people, so she did voluntary work for MS Australia.
She worked with a 97 year-old-woman, an experience she found profound: “One of the most beautiful things I have done.” But again Kristy found that the experience showed her what she didn’t want to do: she decided against doing Art Therapy.

Kristy has taken opportunities as they arose. This has taken her a long way from her original degree. Even though she doesn’t have a background in science, she took a position in science outreach to schools, and enjoyed the work immensely.

Kristy has had a couple of positions since graduating, including working in science outreach for school aged children in metropolitan and country Victoria. This was unexpected, as she didn’t have a background in science, but she enjoyed it and learned a lot.

She now works three days a week in educational assessment and spends two days a week in self-directed study of Arabic. She likes the balance, saying that the paid work exercises a different part of her brain to the creative work she does by herself.

People have been essential to Kristy’s career. Her opportunities usually came by word of mouth. And the advice of people she respects has helped her find her direction.

In terms of developing her career and finding jobs, Kristy says that people have been important. All of her opportunities have come through suggestions by people she knows. Her volunteering and her work and study in the Middle East were also crucial in developing her skills relevant to employment.

And when going for a position, Kristy thinks the most important thing a candidate can take to an interview is stories. Anecdotes and explanations which show their ability, experience and character.
### Appendix F - Project activities

<table>
<thead>
<tr>
<th>Event Date</th>
<th>Event title &amp; location</th>
<th>Purpose of event</th>
<th>Presenter/team member</th>
<th>HEIs represented</th>
<th>Other institutions represented</th>
</tr>
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<tbody>
<tr>
<td>January 2014</td>
<td>2014 Teaching and Learning Forum, University of Western Australia, Perth</td>
<td>Presentation on using ePortfolios to enhance self-efficacy among music and writing students (extension of project ID11-2041)</td>
<td>DB</td>
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<td>January 2014</td>
<td>2014 Teaching and Learning Forum, University of Western Australia, Perth</td>
<td>Presentation on ePortfolios and evidence building for employability (extension of project ID11-2041)</td>
<td>DB</td>
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<td>6</td>
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<tr>
<td>February 2014</td>
<td>UNESCO Centre for Arts Research in Education, NIE, Singapore</td>
<td>Why and how to incorporate self and identity in Arts education. Keynote address for the</td>
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<td>March 2014</td>
<td>2014 Festival of Learning Showcase, Curtin, Perth</td>
<td>Present to colleagues on using ePortfolios with writing students to enhance employability</td>
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<td>May 2014</td>
<td>OLT conference, Sydney</td>
<td>Panel presentation from all commissioned OLT projects to promote discussion and enhance participation</td>
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<td>May 2014</td>
<td>IREG-7 Conference: Employability and Academic Rankings, United Kingdom</td>
<td>Present project to international conference</td>
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<td>July 2014</td>
<td>The 20th international seminar of the ISME Commission for the Education of the Professional Musician, Brazil</td>
<td>Present project to international music educators focused on musician development (led to survey responses from Mexico and Brazil)</td>
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<tr>
<td>July 2014</td>
<td>The 20th international seminar of the ISME Commission for the Education of the Professional Musician, Brazil</td>
<td>Presentation on the role of creativity in students’ development of personal and professional identity</td>
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<td>July 2014</td>
<td>The 31st International Society for Music Education World Conference, Brazil</td>
<td>Present project to international music educators</td>
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<td>July 2014</td>
<td>The 31st International Society for Music Education World Conference, Brazil</td>
<td>Two presentation on using ePortfolios to develop employability in the creative and performing arts (extension of project ID11-2041)</td>
<td>DB</td>
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<td>August 2014</td>
<td>Bond University Teaching and Learning week</td>
<td>Present project to Australian colleagues</td>
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<td>October 2014</td>
<td>The Australian Conference on Science and Mathematics Education, Sydney</td>
<td>Present project to Australian science and mathematics teaching staff</td>
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<td>October 2014</td>
<td>Graduate Employability Symposium, Bond University</td>
<td>Present project to Australian higher education community</td>
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<td>October 2014</td>
<td>Graduate Employability Symposium, Bond University</td>
<td>Workshop on employability strategies delivered with CI Jollands</td>
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<td>Nov 2014</td>
<td>National Forum – Developing graduate employability through partnerships with industry and professional organisations RMIT University</td>
<td>Report on the eSage project (collaboration with RMIT-led commissioned project)</td>
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<td>Nov 2014</td>
<td>Australian Institute of Physics Congress. Canberra</td>
<td>Presentation to Australian physics educators about engaging students in development of self- and career</td>
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<td>Nov 2014</td>
<td>25th Annual Australasian Association for Institutional Research Forum, Melbourne</td>
<td>Present project to international higher education community</td>
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<td>Nov 2014</td>
<td>International Music and Performing Arts Conference, UPSI, Malaysia</td>
<td>Present project to international music and performing arts educators</td>
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<td>Dec 2014</td>
<td>International Conference of the Australian Association for Research in Education, Brisbane</td>
<td>Symposium on employability for all three projects (lead by eSage), with CIs Linda Crane and Margaret Jollands</td>
<td>DB</td>
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<tr>
<td>Dec 2014</td>
<td>International Conference of the Australian Association for Research in Education, Brisbane</td>
<td>Presentation on an employability intervention trialled with engineering students</td>
<td>DB</td>
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<td>Dec 2014</td>
<td>Australasian Association of Engineering Education Conference, Wellington</td>
<td>Masterclass on preparing students for gendered workplaces (collaboration with SD13_2416)</td>
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<td>Dec 2014</td>
<td>Australasian Association of Engineering Education Conference, Wellington</td>
<td>Presentation on the development of self and career with 1st year students in STEM</td>
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<td>Dec 2014</td>
<td>National Council of Tertiary Music Schools</td>
<td>Presentation on employability and women in music</td>
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<td>Dec 2014</td>
<td>Joint CubeNet/VIBEnet/National Committee for Biomedical Sciences Forum: Crossing the boundaries - Transdisciplinary approaches in biosciences education for the 21st century. Shine Dome Canberra</td>
<td>Presentation on the employability of bioscience graduates</td>
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<td>January 2015</td>
<td>2015 Teaching and Learning Conference, University of WA, Perth</td>
<td>Presentation on engaging 1st year students in development of self- and career-awareness (science)</td>
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<td>January 2015</td>
<td>2015 Teaching and Learning Conference, University of WA, Perth</td>
<td>Presentation on the development of employability, with CI Jollands</td>
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<td>January 2015</td>
<td>2015 Teaching and Learning Conference, University of WA, Perth</td>
<td>Presentation on engaging students in future-oriented thinking (writing)</td>
<td>DB</td>
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Enacting strategies for graduate employability
<table>
<thead>
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<th>Date</th>
<th>Event Description</th>
<th>Organisation</th>
<th>Details</th>
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<tbody>
<tr>
<td>January 2015</td>
<td>2015 Teaching and Learning Conference, University of WA, Perth</td>
<td></td>
<td>Workshop on preparing students for gendered workplaces (collaboration with SD13_2416)</td>
</tr>
<tr>
<td>February 2015</td>
<td>The Reflective Conservatoire 4th International Conference, London, UK</td>
<td></td>
<td>Convened a panel on employability in music with experts from Australia, the UK, Europe and the US; launched a call for a two-year collaborative project to extend the project and compile items for the toolbox</td>
</tr>
<tr>
<td>April 2015</td>
<td>Flinders University CUT Lunch Series 2015: ‘Employability in a Changing World: How can we ensure our graduates are work-ready and adaptable to the changing employment landscape?’</td>
<td></td>
<td>Present project to Flinders University staff</td>
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<td>June 2015</td>
<td>LH Martin Seminar</td>
<td></td>
<td>Seminar on the project in relation to implications for STEM</td>
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<tr>
<td>July 2015</td>
<td>Higher Education Research Development Conference, Melbourne</td>
<td></td>
<td>Half-day workshop on employability with invited guest speakers from across Australia</td>
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<tr>
<td>July 2015</td>
<td>InSPIRE postgraduate conference, Perth</td>
<td></td>
<td>Presentation on becoming work ready, part of an expert panel on career options for research graduates</td>
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<tr>
<td>Oct 2015</td>
<td>12th annual conference of The International Society for the Scholarship of Teaching &amp; Learning (ISSOTL)</td>
<td></td>
<td>Half-day workshop on enabling and enacting employability within higher education classrooms; expert panel discussion</td>
</tr>
</tbody>
</table>
Appendix G - Industry snapshots

What do we know about the work of writing graduates?

by Dawn Bennett and Rachel Robertson, Curtin University and Sarah Richardson, Australian Council for Educational Research.

What does the data tell us?

The 2013 Australian Graduate Survey collected data from 4,360 graduates from Communication and Media Studies degrees. Data was collected between four and six months after graduation.

Population

Data was collected from graduates with the following characteristics:

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>1,367</td>
<td>31.4</td>
</tr>
<tr>
<td>Female</td>
<td>2,993</td>
<td>68.6</td>
</tr>
<tr>
<td>Median age</td>
<td>23</td>
<td>-</td>
</tr>
<tr>
<td>First language English</td>
<td>3,445</td>
<td>79.0</td>
</tr>
<tr>
<td>First language Other</td>
<td>793</td>
<td>18.2</td>
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<tr>
<td>Graduate from undergraduate degree</td>
<td>3,576</td>
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<tr>
<td>Graduate from postgraduate degree</td>
<td>737</td>
<td>16.9</td>
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Overall outcomes

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<tr>
<th>Status</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full-time work</td>
<td>1,567</td>
<td>36.4</td>
</tr>
<tr>
<td>Part-time work</td>
<td>1,625</td>
<td>37.8</td>
</tr>
<tr>
<td>Self-employed</td>
<td>261</td>
<td>8.4</td>
</tr>
<tr>
<td>Studying full-time</td>
<td>742</td>
<td>17.4</td>
</tr>
<tr>
<td>Studying part-time</td>
<td>211</td>
<td>4.8</td>
</tr>
</tbody>
</table>

Overall, 36.4 per cent of graduates was working full-time, 37.8 per cent was working part-time and 8.4 per cent was self-employed. In relation to studying, 17.4 per cent was studying full time and 4.8 per cent was studying part time.

Employment outcomes

Of those 3,192 graduates who were working, whether part-time, full-time or self employed, the largest area of main employment was publishing, accounting for 6.6 per cent of graduates. Other graduates were distributed across multiple employment areas. The chart below illustrates just those areas in which at least 1.5 per cent of graduates was employed.
Further study

Of the 910 graduates who were undertaking further study, 44.7 per cent was in the field of Creative Arts (including Communication and Media Studies) and 22.9 per cent was in the field of Society and Culture.

More information?

For more information on the outcomes of graduates from Communication and Media Studies degrees at your institution, contact the Deputy-Vice Chancellor Academic.

What is the broader context?

Writing programs have undergone an international expansion since the 1990s. However, there still seems to be little understanding about the reality of earning a living as a writer (Bennett & Robertson, in review).

Whilst officially we know very little about the destinations of professional writing graduates in Australia (Baverstock 2007), we know anecdotally that graduates work across associated professions and industries including public relations, advertising, communications, government, information technology, publishing, administration and journalism.

Australian labour force data in related occupations suggest that employment levels in these sectors are fairly static (Figure 1), and yet the number of students and graduates in Australia has more than doubled since the late 1990s (Australian Government 2013). It is likely, therefore, that a growing proportion of writing graduates need to work in multiple concurrent roles and/or both within and beyond traditional destinations.
Enacting strategies for graduate employability

Writing graduates who hold multiple concurrent roles will tend also to self-manage their careers and to create their own work opportunities through reputation building and networking (Arthur & Rousseau 1996; Bridgstock 2009).

This often means moving across the boundaries of employers, clients and task orientations, between different employment arrangements, and between traditional, online and digital environments (Daskalaki 2010) into roles which in some cases did not even exist five years earlier (Bennett & Robinson, in review).

**Things to think about**

1. Writers are likely to cross the boundaries of employment several times during their careers. This means that students need to learn the concept of life-long learning;

2. In most workplaces, writers must produce texts amidst distractions such as phones, distracting co-workers and writing deadlines. These can be vastly different than university work, so students benefit from early and regular industry exposure;

3. Writing graduates often cite lack of experience with producing texts other than those that are part of academic requirements. Effective writers must quickly adapt to the style, length and content of texts required. For the successful accomplishment of writing tasks in both higher education and professional settings, situation-specific types of writing knowledge need to be operationalised, and links made between general and specific knowledge (Beaufort, 1999).

4. Publications form the basis of a writer’s career or reputation. Janssen (1998) goes as far as proposing that the literary “status” of writers is strongly dependent on the critical attention given to their writing in daily and weekly press. In other words, being considered a writer depends on publications rather than on academic qualifications or other formal criteria. At the student level, publications and other example of writing can be illustrated through a digital portfolio;
5. Graduates need to be able to interact with others in order to manage team-based work and professional networks. These skills can be developed in class and in part-time work and volunteer roles as well as during industry placements relating to writing;

6. Janssen (1998) notes that writers who are active in several areas may have a better chance of attracting the critics’ attention than those who publish only in book form. A similar argument could be made for attracting the attention of potential employers and publishers;

7. Duhé and Zukowski’s (1997) analysis of the broadcast curriculum found that individuals with hiring authority favour a polished résumé with journalism skills over an academic degree. Similarly, television news broadcasters looked for experience over education. However, graduates who can illustrate both will be best placed to find work;

8. Robertson (2011) reviewed employer expectations of professional writing and publishing graduates and concluded that employers of all sizes and in all industries require graduates with high-level generic skills;

9. Robertson also predicted a rise in demand for generalist communicators and writers, and for highly skilled communications graduates able to meet the demands of digital publishing, social media and other developing technologies. Specifically, “on-line writing, editing and publishing skills are key skills which will be in demand in the future in Australia and internationally” (p. 2)

These studies highlight the need to ensure that students have sufficient industry experience and that they are able to evidence their work in each setting. In line with this the project’s toolkit has developed resources designed to help educators to address five key themes:

- Develop skills and knowledge;
- Develop self;
- Develop career awareness;
- Interact with others; and
- Navigate the world of work.

Further resources

- Capstone case study from Curtin University (Professional Writing Program)
- Research report on employer expectations (Rachel Robertson, 2011)
- ePortfolio summary slides from the Curtin project
- Learning guides and resources used within the capstone
- TILE tools to engage students with thinking about identity and employability
- Career profiles in writing from the enhancing employability website
References


Further reading


What do we know about the work of performing arts graduates?

Prepared by Dawn Bennett, Curtin University and Sarah Richardson, Australian Council for educational Research

What does the data tell us?

The 2013 Australian Graduate Survey collected data from 1,444 graduates from Performing Arts degrees. Data was collected between four and six months after graduation.

Population

Data was collected from graduates with the following characteristics:

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>595</td>
<td>41.2</td>
</tr>
<tr>
<td>Female</td>
<td>849</td>
<td>58.8</td>
</tr>
<tr>
<td>Median age</td>
<td>23</td>
<td>-</td>
</tr>
<tr>
<td>First language English</td>
<td>1275</td>
<td>88.3</td>
</tr>
<tr>
<td>First language Other</td>
<td>141</td>
<td>9.8</td>
</tr>
<tr>
<td>Graduate from undergraduate degree</td>
<td>1262</td>
<td>87.4</td>
</tr>
<tr>
<td>Graduate from postgraduate degree</td>
<td>157</td>
<td>10.9</td>
</tr>
</tbody>
</table>

Overall outcomes

Overall, 57.5 per cent of graduates was working part-time, 28.1 per cent was self-employed and 19.1 per cent was working full-time. In terms of studying, 33.5 per cent was studying full-time and 5.5 per cent was studying part-time.

<table>
<thead>
<tr>
<th>Status</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full-time work</td>
<td>276</td>
<td>19.1</td>
</tr>
<tr>
<td>Part-time work</td>
<td>817</td>
<td>57.5</td>
</tr>
<tr>
<td>Self-employed</td>
<td>298</td>
<td>28.1</td>
</tr>
<tr>
<td>Studying full-time</td>
<td>471</td>
<td>33.5</td>
</tr>
<tr>
<td>Studying part-time</td>
<td>77</td>
<td>5.5</td>
</tr>
</tbody>
</table>

Employment outcomes

Of those 1,064 graduates who were working, whether part-time, full-time or self employed, the two largest areas of main employment were Adult and Community Education, accounting for 14.6 per cent of graduates, and Creative and Performing Arts, accounting for 14.1 per cent of graduates.

Other graduates were distributed across multiple employment areas. The chart below illustrates just those areas in which at least 2 per cent of graduates was employed.

The chart indicates that the education sector is the largest employer of performing arts graduates overall, accounting for 30.5 per cent of graduates that was working.
Further study

Of the 550 graduates who were undertaking further study, 48.1 per cent was studying in the field of Performing Arts and 26.9 per cent was studying in the field of Education.

More information?

For more information on the outcomes of graduates from Performing Arts degrees at your institution, contact the Deputy-Vice Chancellor Academic.

What is the broader employment context?

The performing arts are located within the creative industries sector, which is commonly defined as including the commercial and non-commercial industries of architecture and design; film, television, video, radio and publishing; fine arts; music and the performing arts; software and computer gaming; advertising; and crafts (UNCTAD, 2008).

The latest Australian Census data (2011) suggest that creative industries employment represents 5.3% of Australia’s national workforce, or 531,000 people, and that the creative and cultural industries contribute over $86 billion to Australian GDP.

These industries are among Australia’s strongest performers (CCI Scorecard, 2013, n. p), with 40% faster growth than that seen than in the general economy. This growth is attributed largely to the digital revolution and growth in digital and design services. Performing arts graduates have opportunities across and beyond this diverse and exciting sector.

Understanding creative careers

Graduate employment data suggest that graduates of arts and creative industries programs consistently have the poorest graduate outcomes of the 40 broad disciplines measured in Australia’s annual graduate destination statistics collection (Graduate Careers Council of Australia, 2012).
According to 2013 Graduate Survey data figures, which amassed data from 83,000 graduates, visual and performing arts graduates engage in a range of employed, self-employed roles including both part-time and full time work.

When only full time employment is considered, these poor graduate outcomes are evident. However, as shown at Figure 1, when other forms of work are included the employment outcomes of all students emerge as relatively similar (Bennett et al., 2015).

The reason for this disparity is that despite the size and performance of the creative industries, creative workers’ careers are too complex to be recorded in traditional measures such as the Census or the Graduate Destination Survey.

The limitations of existing data are illustrated by empirical research: for example, economist David Throsby (2008) concluded that the actual number of creative workers is over twice the official recorded number.

![Figure 1: Employment outcomes, Graduate Destinations Survey 2013 (per cent)](Data supplied by the Department of Education)

To provide more specificity, the Australian Research Council’s Centre of Excellence for Creative Industries and Innovation established a creative trident of occupations (Higgs et al., 2008). The trident describes workers as *specialist creatives* employed in core creative occupations within creative industries (for example, ballet dancers); *embedded workers* employed in core creative occupations within other industries (for example, musicians working in therapeutic settings); or *support workers* employed in other occupations within the creative industries (for example, workers undertaking retail or business support roles). Creative workers undertaking work predominantly outside the trident are defined as ‘non-creative workers’.

Enacting strategies for graduate employability
One of the anomalies of the creative trident model is that teaching is deemed a ‘non-creative’ activity, which situates this important and valuable use of artistic skills outside a creative worker’s creative portfolio of work. The creative trident also categorises individual workers within a single trident mode, which means it cannot capture the complexities of creative work (Higgs et al., 2008). We can, however, use the trident modes in combination with empirical studies.

Eighty-three percent of the respondents in Bennett et al’s 2014 study engaged in more than one trident mode, and only 36% held a single role. Figure 2 illustrates the intersections of specialist, support, and embedded and non-creative roles. This enables us to look inside a “portfolio” of creative work. It also provides a useful talking point with students, who can be challenged to think about potential specialist, support, embedded, teaching and other roles that align with their interests and strengths.

![Figure 2: The intersections of work across the creative trident (Bennett et al., p. 164)](image)

The lack of nuanced data has led to empirical research including analyses of ‘good and bad’ work (Fitzgerald, Rainnie & Bennett, 2011); old and new sectors including digital economies (Hesmondhalgh & Baker, 2011); the characteristics of creative work (Smith & McKinley, 2009); flexibility and autonomy (Banks, 2010); and creativity itself (Hesmondhalgh, 2008). Studies such as these are starting to reveal the realities of work in the creative industries sector, including for graduates.

**Where do graduates go? Focusing in the performing arts**

According to the Australian Government, there were almost 21,000 creative arts graduates in 2013 and 20% of these graduates were employed on a full-time basis (Graduate Destination Survey data, 2013). In other sectors we might imagine this 20% to be in full-time jobs with a single company; however, this sector is a little different!

Whilst some music and dance graduates hold full-time positions in the major arts companies, these positions represent a small minority of performing artists. In Australia there are less than 600 full-time company positions for instrumentalists, 50 for vocalists and just under 200 for dancers (Bennett, 2008; 2009); artists who come from other countries
hold approximately one-third of these positions. Researchers in the US, Europe and the UK report similar situations (see Beeching, 2010; Perkins, 2012). Many arts graduates aspire to make a living through the creation or expression of their creative work. Because full-time arts company employment is rare, employment for many graduates comes in the form of creative work undertaken outside of the arts and creative sectors: Cunningham and Higgs (2010) determined that in 2006, 65.5% of dancers or choreographers and 40.5% of musicians, singers or composers are employed principally outside the creative industries.

Bennett et al’s study (2014) has found no significant differences between the average number of hours in each role; between sexes; or between employed/self-employed workers, contractual or casual work. This suggests that complex and changeable patterns of work exist throughout the career life cycle and across creative disciplines and genres.

Creative workers manage their own careers, work typically in small firms and on an ad-hoc basis, gain employment through networks, and stay employable by learning new skills and ensuring that they were visible to the market. These are the most likely work patterns for graduates.

Performing artists are up to five times more likely to be self-employed than other workers, and in the case of professional composers self-employment stands at 93% (Throsby and Zednik, 2010). This high rate of self-employment is similar in other countries and also in city-based studies (cf Center for an Urban Future, 2008). Moreover, one in five creative workers are understood to hold a “day job” entirely unrelated to the creative industries (Throsby and Zednik, 2010).

Approximately 85% of dance artists are registered as a business and the Australian dance sector consists “almost entirely of dance artists for whom independent project-based work is the norm and the inclusion of non-performance roles almost inevitable” (Bennett, 2009, p. 28).

Similarly, Burns (2007, p. 12) has found that UK dance artists typically include “arts related work such as teaching alongside their performance work and they often work in non-arts work in order to earn an adequate living”. Vincs (2007, n. p) has labelled this work “hybridity”, and the term is a useful tool when discussing work and career with students.

**Things to think about**

Although performing arts work is complicated, it is also exciting for graduates who are informed and work ready. Here are some things to think about:

1. Employability for arts graduates most often demands the skills required to create and manage a small business and the resilience to negotiate work that is intermittent, complex and challenging;

2. Arts graduates are likely to hold multiple concurrent roles within a changing portfolio of work. They are likely to undertake some or all of their work within another economic sector;
3. Arts graduates are likely to work as sole traders or in small firms, working in casual and project-based employment with little security. They are likely to supplement their creative work with more secure work that is unrelated to the arts or that involves related roles such as teaching. Teaching needs to be positioned as a valuable and “successful” outcome;

4. Arts graduates are likely to obtain work through networks, often because tight budgets and timeframes lead employers and clients to hire those they know and trust.

5. Throughout the career lifecycle, arts graduates will need to remain employable by learning new skills, ensuring they are visible to the market, and knowing the market and those within it; and

6. Arts graduates commonly report that they do not have these skills on graduation.

As asked what changes they might make to their formal education and training, arts alumni recommend the inclusion of small business skills, entrepreneurship skills, self-management skills and industry experience.

These aspects align with the findings of the OLT Commissioned project, and tools and resources within the toolkit are designed to help. Specifically, the toolkit resources help educators to address five key themes:

- Develop skills and knowledge;
- Develop self;
- Develop career awareness;
- Interact with others; and
- Navigate the world of work.

References


Bennett, D., Coffey, J., Fitzgerald, S., Petocz, P., & Rainnie, A. (2014). Beyond the creative: Understanding the intersection of specialist and embedded work for creatives in
Enacting strategies for graduate employability


What do we know about the work of information technology graduates?

The 2013 Australian Graduate Survey collected data from 4,957 graduates from Information Technology and Computer Science degrees. Data was collected between four and six months after graduation. The breakdown of disciplines is shown in the table below.

<table>
<thead>
<tr>
<th>Discipline</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information Technology</td>
<td>460</td>
<td>9.3</td>
</tr>
<tr>
<td>Computer Science</td>
<td>1,785</td>
<td>36.0</td>
</tr>
<tr>
<td>Information Systems</td>
<td>1,600</td>
<td>32.3</td>
</tr>
<tr>
<td>Other Information Technology</td>
<td>1,112</td>
<td>22.4</td>
</tr>
</tbody>
</table>

Population

Data was collected from graduates with the following characteristics:

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>3,910</td>
<td>78.9</td>
</tr>
<tr>
<td>Female</td>
<td>1,044</td>
<td>21.1</td>
</tr>
<tr>
<td>Median age</td>
<td>26</td>
<td>-</td>
</tr>
<tr>
<td>First language English</td>
<td>2,189</td>
<td>44.2</td>
</tr>
<tr>
<td>First language Other</td>
<td>2,602</td>
<td>52.5</td>
</tr>
<tr>
<td>Graduate from undergraduate degree</td>
<td>2,971</td>
<td>59.9</td>
</tr>
<tr>
<td>Graduate from postgraduate degree</td>
<td>1,915</td>
<td>38.6</td>
</tr>
</tbody>
</table>

Overall outcomes

<table>
<thead>
<tr>
<th>Status</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full-time work</td>
<td>2,131</td>
<td>44.0</td>
</tr>
<tr>
<td>Part-time work</td>
<td>1,088</td>
<td>22.5</td>
</tr>
<tr>
<td>Self-employed</td>
<td>205</td>
<td>6.6</td>
</tr>
<tr>
<td>Studying full-time</td>
<td>688</td>
<td>14.3</td>
</tr>
<tr>
<td>Studying part-time</td>
<td>243</td>
<td>5.1</td>
</tr>
</tbody>
</table>

Overall, 44 per cent of graduates was working full-time, 22.5 per cent was working part time and 6.6 per cent was self-employed. In relation to studying, 14.3 per cent was studying full time and 5.1 per cent was studying part time.

Employment outcomes

Of those 3,222 graduates who were working, whether part-time, full-time or self employed, the largest area of employment was Computer System Design, accounting for 19.7 per cent of graduates. Other graduates were distributed across multiple employment areas. The chart below illustrates just those areas in which at least 1.5 per cent of graduates was employed.
Further study

Of the 933 graduates who were undertaking further study, 68.3 per cent was in the field of Information Technology and 16.0 per cent was in the field of Management and Commerce.

More information?

For more information on the outcomes of graduates from Information Technology and Computer Science degrees at your institution, contact the Deputy-Vice Chancellor Academic.
What do we know about the work of biological sciences graduates?

The 2013 Australian Graduate Survey collected data from 4,227 graduates from Biological Sciences degrees. Data was collected between four and six months after graduation.

**Population**

Data was collected from graduates with the following characteristics:

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>1,595</td>
<td>37.7</td>
</tr>
<tr>
<td>Female</td>
<td>2,632</td>
<td>62.3</td>
</tr>
<tr>
<td>Median age</td>
<td>23</td>
<td>-</td>
</tr>
<tr>
<td>First language English</td>
<td>3,112</td>
<td>74.6</td>
</tr>
<tr>
<td>First language Other</td>
<td>1,059</td>
<td>25.4</td>
</tr>
<tr>
<td>Graduate from undergraduate degree</td>
<td>3,461</td>
<td>81.9</td>
</tr>
<tr>
<td>Graduate from postgraduate degree</td>
<td>755</td>
<td>17.9</td>
</tr>
</tbody>
</table>

**Overall outcomes**

<table>
<thead>
<tr>
<th>Status</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full-time work</td>
<td>958</td>
<td>23.0</td>
</tr>
<tr>
<td>Part-time work</td>
<td>1,679</td>
<td>40.3</td>
</tr>
<tr>
<td>Self-employed</td>
<td>83</td>
<td>3.2</td>
</tr>
<tr>
<td>Studying full-time</td>
<td>1,750</td>
<td>42.3</td>
</tr>
<tr>
<td>Studying part-time</td>
<td>146</td>
<td>3.5</td>
</tr>
</tbody>
</table>

Overall, 40.3 per cent of graduates was working part time, 23 per cent was working full time and 3.2 per cent was self-employed. In relation to studying, 42.3 per cent was studying full time and 3.5 per cent was studying part time.
Employment outcomes

Of those 2,638 graduates who were working, whether part-time, full-time or self employed, the largest area of main employment was higher education, accounting for 17.2 per cent of graduates. Other graduates were distributed across multiple employment areas.

The chart below illustrates just those areas in which at least 2 per cent of graduates were employed.

Further study

Of the 1,897 graduates who were undertaking further study, 51.3 per cent was in the field of Natural and Physical Sciences (including Biological Sciences) and 32.3 per cent was in the field of Health.

More information?

For more information on the outcomes of graduates from Biological Sciences Degrees at your institution, contact the Deputy-Vice Chancellor Academic.

The broader context

The life sciences cover a broad range of disciplines involving the scientific study of living things. These include parts of the environmental sciences focusing on biology in ecological systems through to the “molecular” disciplines such as biochemistry. The life sciences can be studied in a variety of contexts including relating to the environment or in support of clinical disciplines such as nursing, physiotherapy or paramedicine.

The life sciences are addressed through both degree with a professional focus and through general science degrees. Thus the degree to which employability is addressed varies greatly. Often life sciences are studied in a general degree, such as biomedical science, as
preparation for graduate professional studies. This strategy is becoming more common with the adoption of the “Melbourne Model” of a general degree followed by graduate professional study.

Another consideration with the life sciences is that, outside the clinical professions, a substantial proportion of employment is directly related to higher education and research. This is borne out by the graduate outcomes for the life sciences where their single largest area of employment is higher education (17%). Beyond this graduates go into a multitude of industry areas—retailing and medical services being two examples.

**Employability for life sciences in general degrees**

The life sciences are characterised by poor levels of graduate full-time employment, high levels of continuing full time study and below average levels of relevance of their degree to the jobs they secure after graduation (Graduate Career Australia, 2013). The apparent poor employment outcomes for life science graduates are not new. McInnis, Hartley and Anderson (2000) reported the life sciences then had the lowest full time employment rates.

In the same survey McInnis et al (2000) also found that almost half of science graduates obtained professional or managerial jobs within one year of graduation. Another 20% had jobs at a technical level. And around 80% thought their job was an appropriate part of their career path. The majority of graduates remained within the general area of science: 70% of those employed were working for an organisation with a scientific focus.

However, more recent data from the 2011 census shows that people with a degree in the life sciences did not enjoy as good an employment outcome as those in technology, engineering, and mathematics as they were least likely of all science disciplines to be in professional or managerial employment (less than 60%) (Norton, 2013).

Despite the poor employment outcomes in the sciences there has been an increase in enrolments, which, according to Norton (2013) has been a result of government policy encouraging students to take up STEM disciplines. Advocates for science education, such as the Chief Scientist, Ian Chubb, have argued graduate employment rates, as measured by the Australian Graduate Survey, are not adequate in judging generalist degrees where career outcomes are less clear than professionally oriented degrees (Ross and Hare, 2014).

There have been attempts to place the life sciences in a more industry-relevant context: several Australian universities, such as the University of Queensland, the University of New South Wales, Flinders University and Monash University, have run degrees with a vocational emphasis in the area of biotechnology (see Brack, Schmidt & MacKinnon, 2010). Anecdotal evidence has shown that these degrees have not enjoyed the popularity that degrees in biomedical sciences have. This probably reflects the relatively few positions in the biotechnology industry, together with the insufficiency of an undergraduate degree for the few industry positions that exist.

In another project conducted by Monash University, all biotechnology employers consulted, stated that they preferred to appoint science graduates with an honours degree (MacKinnon, personal communication). This was because the honours degree involves a substantial research project developing the research and other skills required in the
scientific workplace. In the sciences, undergraduate research projects take the form of an “apprenticeship” in which a student is attached to a research laboratory and receives training from experienced members of the laboratory. The intensive nature of the project is one of its limitations. According to Brew and Jewell (2012) only up to 2,000 students across all disciplines engage in such activities annually. This represents a tiny proportion of the total enrolments in the life sciences. It is unlikely that there is capacity in the life science research sector to greatly increase this number. This means that a less intensive form of research activity would be necessary if it were to be more widely implemented.

Things to think about

1. When considering undertaking a life science degree, students should aware that the majority of life science graduates continue into further study. This can be graduate professional study, or it can be a research degree (usually preceded by an honours year). According to the graduate destination data there is no single clear professional task for life science graduates.

2. An undergraduate degree alone is unlikely to lead to a career in science. A qualification including experience in scientific research may be required. At the minimum an honours year is required, but a higher degree by research (PhD) is not uncommon.

3. Most direct employment in the life sciences is associated with higher education and research. Again the graduate destination survey data shows no single large employment group outside of this sector.

4. General life science degrees will expose students to scientific research. At the end of a degree graduates will have good scientific knowledge and a good understanding of research, but will have limited experience at doing scientific research. It is most likely that industry exposure will be limited to the scientific research laboratory.

5. According to our case studies, general employability skills are not prominent in general life science degrees. Our case studies suggest that extra-curricular activities including part-time employment and volunteering are important for employability skills development.

References


Norton, A. 2013 “A bubble about to burst: why we don’t need more maths and science graduates”. *The Conversation*, published online Friday 21 June 2013.

Ross, J. and Hare, J., 2014 “Chubb slams claims of a graduate glut” The Australian, Published online May 21 2014.
Appendix H - External evaluation
Appendix I - Deputy Vice-Chancellor Certification

Certification by Deputy Vice-Chancellor

I certify that all parts of the final report for this OLT grant provide an accurate representation of the implementation, impact and findings of the project, and that the report is of publishable quality.

Name: ..............................................................Date: .......................

Enacting strategies for graduate employability 86