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Enacting strategies for graduate employability: How universities can best support students to develop generic skills

Final Report 2016
(Part A)

Deakin University

The University of Sydney

The University of Melbourne

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Final report 2016 (Part A)

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Executive Summary

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. Recognising that the number of part-time, casual and/or multiple job-holding workers has never been higher and that traditional forms of employment are increasingly rare, this project focused on disciplines with ill-defined or difficult-to-enter graduate destinations. These included music and dance; biomedical sciences and biotechnology; professional and creative writing; and computer science. In contrast to the employer focus of the other projects, the team focused on students, graduates and academic leaders.

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.

Project approach

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

- To *synthesise* 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](#).

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.

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.

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.
- Post-project activities, including through the website, will encourage systemic adoption.

Key findings and recommendations

This project has enhanced understanding of graduate employability 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. Whilst the team acknowledges the expert and impactful employability work undertaken by many colleagues, 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 are likely to have three audiences. The first and second of these 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 challenges 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 potential for a systematic approach to the development of effective employability skills. The research concluded that employability development should focus on the five themes illustrated at Figure 1:

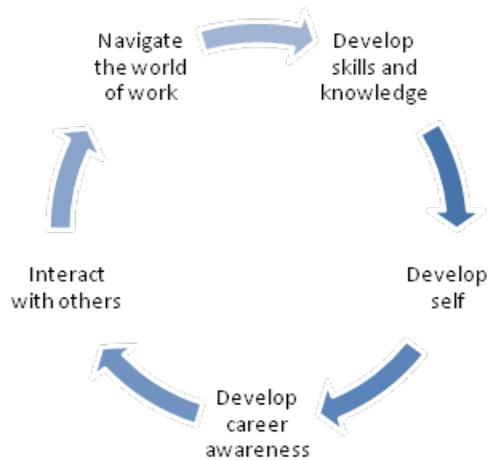


Figure 1: Five employability themes

Recommendations

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. In addition, 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 successor to 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.

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

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. As such, the team drew on numerous extant studies in reporting its findings and informing its recommendations.

The survey was administered to higher education students between July 2014 and January 2015. It required approximately 15 minutes to complete; 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 were female.

Table 1: Survey respondents by broad field of education

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

* 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
- 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 students' ability to adapt to changing workforce needs. Although not all educators may agree with this statement, most institutions are moving to accept this responsibility.

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 reportedly even more pronounced (Bennett & Bridgstock, 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). And alongside this is the increasing likelihood that "employed" graduates incorporate self-employed, self-managed work within a portfolio of concurrent roles (Lourenço, Taylor & Taylor, 2013).

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 and they are becoming more inefficient in line the increasing complexity 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 & Bridgstock, 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.

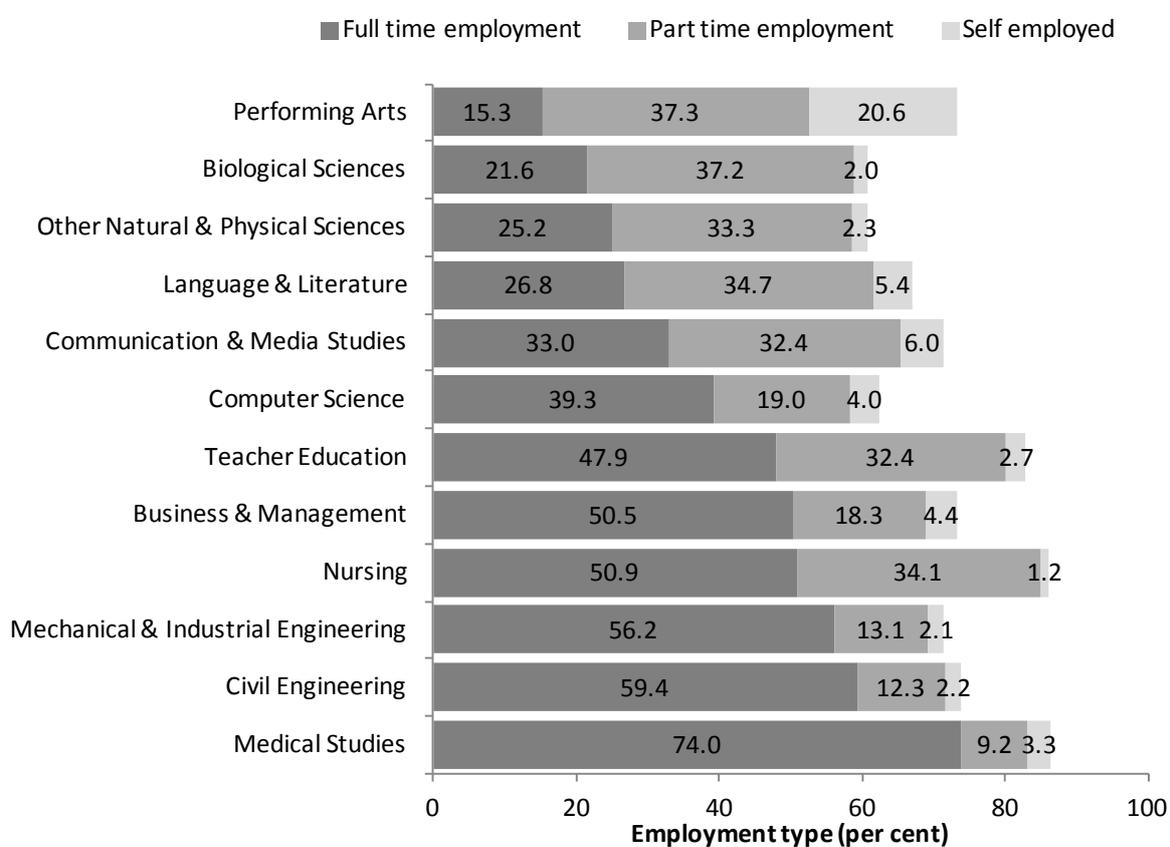


Figure 2: Employment outcomes, Graduate Destinations Survey 2013 (per cent)

(Data supplied by the Department of Education and Training for use in this project)

What is graduate employability?

There exist many definitions of graduate employability. These reflect differences in the underpinning beliefs about 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), for example, 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 potential for 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 (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 emerge as 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)

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

* 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 a team member’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.

Nevertheless, few students 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 participating 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 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.

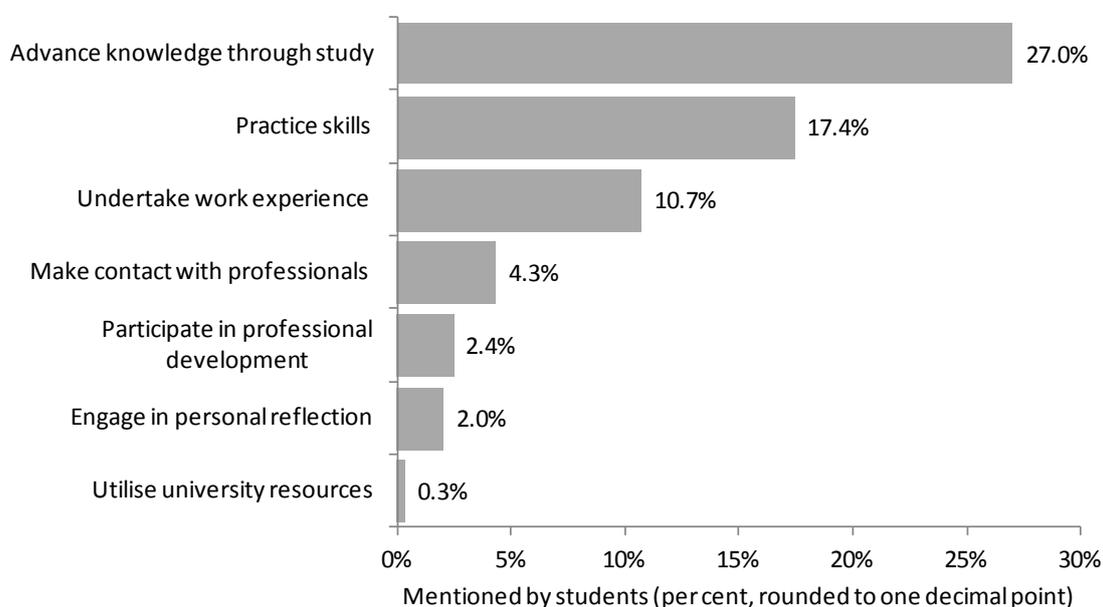


Figure 3: Students’ strategies for enhancing employability (n=765 valid responses)

Another dominant theme concerned work-integrated learning. Only 11 per cent of the students referred to experience within or related to industry as a strategy for enhancing employability; but 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 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”*. Paradoxically, 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. The potential benefits of including WIL as a key employability strategy include enhanced workforce capability, skills and individual prospects alongside stronger industry-education partnerships and informed leadership.

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. Nonetheless, 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. Moreover, 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/optional 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 (from 242) who gave feedback on their degree programs. The students identified five related areas of concern, which were subsequently identified by both case study graduates and practitioners. Whilst these are in some ways well-known concerns, the project reinforces

their import. 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.

The students who engaged in this study expected to become more employable through further study and practice, and less than one per cent expected to use university resources for this development. 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 reported using feedback and self-reflection. Although this is a relatively small sample, the findings suggest opportunities for the more effective communication of available employability development initiatives both at an institutional level and within programs. Educators are a primary source of career information for students, and logically it is more likely that they will engage in employability development if their lecturers advocate it as a valuable aspect of their learning.

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 challenges 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 used to build 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 through student engagement. In line with the student survey, however, few case study graduates reported being aware of such opportunities as students. Moreover, graduates who recalled opportunities to enhance their employability also remembered having little motivation to engage in them.

The opportunities lie in the fact that 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 for it to be absorbed by learners. Senior leaders agreed that an essential yet challenging issue for higher education is to make explicit links between learning and future work:

... explicit links 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 ... 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, whilst protecting students from exploitation in the workplace, has also reduced the availability of non-credit bearing placements and work experience. Senior careers advisors Dr Julie Howell and Dr Alan McAlpine 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 Act can result 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, who already face difficulties in accessing placements and who are more likely to be employed in exploitive situations that structured co-curricula work placement programs exclude. Curtin University careers advisor and President of the National Association of Graduate Careers Advisory Services, Dr Julie Howell, emphasised the need for "cultural shifts, by: governments who could provide incentives to employers offering work placements; employers who could broaden the pool of students they consider for placements and their role in the learning process; and, universities who could offer extensive placements opportunities and demonstrate that work placements can occur in numerous forms without contravening the Act.

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 been prefaced, 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. This was attributed less to technical or discipline-specific skills and more to deficits in the generic skills required to navigate the world of work. In the words of one graduate:

... 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 and informed by the extant research. On the basis of the combined data set, these were refined to include broad definitions as shown below at Figure 4.

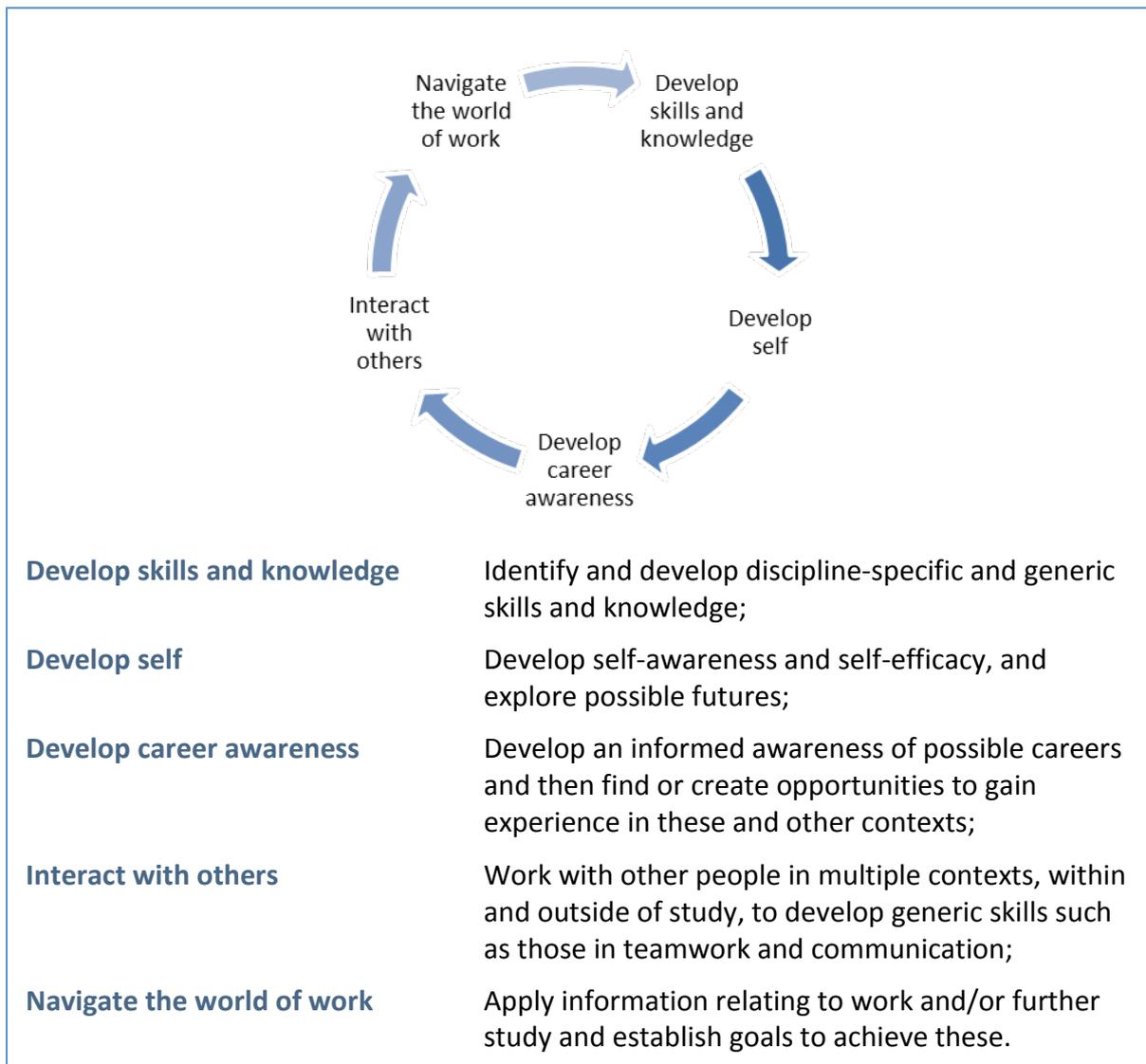


Figure 4: Framework for developing employability

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 active and explicit engagement with employability within higher education. Figure 4 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 development 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' informed by both the study and extant research.

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 4. This work will continue post-project.

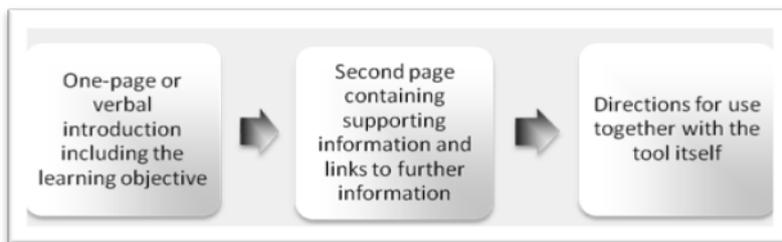


Figure 5: Format of the eSage toolkit resources

The toolkit focuses on making existing resources accessible and user friendly for educators. At the same time, the toolbox includes reflective activities to help educators consider the *what*, *who* and *how* of employability: what they consider employability to be, and which elements of the toolkit 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 6.



Figure 6: Snapshot of the Developing Employability website

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.

Taking into account both the extant research and the findings of the current study, this project team argues 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.

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 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 confirm 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. Similarly, 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 successor to 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. Given its alignment with the findings of extant research the team concludes that a number of issues are deserving of further attention. These are discussed in the final section of the report.

Understanding employability

The research re-affirms 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, the enhancement of employability requires significant systemic change and heralds significant opportunities. These opportunities include the effective delivery of curricula that develop the intellectual, creative and employability capacity of graduates to benefit both themselves and society. Effective change will initially require internal (institution) and external (government) funding for leaders who can facilitate program-wide curricular teams to achieve curricular reform and drive inter-institutional collaboration.

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*

word". Change such as this requires new thinking around students' authentic learning experiences; and yet, 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. HEIs have the opportunity to take a leading role as employers.

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 successor to 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 concern is the ambiguity 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, can limit opportunities for students to enhance their employability through work opportunities. Other opportunities for future work might include 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. The Australian Vice Chancellors might consider working in consultation with careers advisors to clarify the 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. 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.

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Appendices -Final Report (Part B)

For the final report appendices, these have been published separately as Final Report Appendices (Part B). Please refer to the following link <<http://www.olt.gov.au/project-how-universities-can-best-support-students-develop-generic-skills-enacting-strategies-gradua>>

The appendices include the following:

Appendix A - Student survey instrument

Appendix B - Case study instruments

Appendix C - Case study sample

Appendix D - Interventions that enhance student and graduate employability

Appendix E - Case study vignettes

Appendix F - Project activities

Appendix G - Industry snapshots

Appendix H - External evaluation

Appendix I – Achievements Statement

Appendix J - Deputy Vice-Chancellor Certification