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Employability in Higher Education:
A review of practice and strategies around the world

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Executive summary

This report is designed to provide a review of the literature associated with the practice, ecosystems and strategies in place around the world that are used to improve the employability levels of students and graduates and ensure that their skills and knowledge are fit-for-purpose for the graduate labour market upon leaving Higher Education (HE).

The context of the review has been guided by six main research questions:

▸ How are HEIs developing coherent employability programmes?

▸ [What are the] Best practice methods of embedding employability skills into the curriculum, and the importance of pedagogy?

▸ What graduate employability skills do employers value?

▸ How can HEIs and employers build closer working relationships?

▸ How is impact measured?

▸ What are the 'directions' that future research should take in the short- to medium-term?

Due to the broad audience and therefore ambitious scope of the review, the recommendations cited in this summary are intended to act as a reflective prompt only. To the more experienced stakeholders who have had a long-standing and professional engagement with this agenda, some conclusions may appear obvious. For many they will not be so apparent for a variety of reasons, not least because the agenda may not be as mature in their country or they may have limited exposure from a personal perspective. For the latter group of stakeholders, this is not an exhaustive list, but merely an opportunity to prompt thinking and reflection as to how ecosystems can work more effectively, recognise mutual benefits of collaborative and co-operative working and assist individuals in applying an increased impact in their work. These recommendations are also intended to provide an opportunity to return and re-engage with the agenda. Indeed, despite many of the reports reviewed being published several years apart, the messaging often remains consistent in terms of conclusions and recommendations made to enable graduates to become more attuned and equipped for the graduate labour market.

However, even for the more experienced stakeholders, there are new perspectives that act as an alternative lens to address past challenges and issues. These include ever-increasing numbers entering higher education (and growing transnational education), new strategic and political drivers, developments in global economic necessity for knowledge workers, improvements in information and communications technology and an extended evidence-base that triangulates previous conclusions. All, amongst many other factors, increase the global prominence of the employability agenda and nurture a more intensive appetite amongst key enabling stakeholders to implement solutions that have a real and scalable impact.

Recommendations and reflective questions are presented by stakeholder group as follows:

For government, policy makers and funding bodies

▸ Consider how the effectiveness of career and employability support interventions can be measured beyond the employed vs unemployed status of graduates following their time in HE. Investigate more robust measures for evaluating the career 'learning gain' acquired by students through related University support.

▸ Identify and reward good practice for employability support interventions that have clear demonstrable evidence of impact which is both sustainable and scalable. They should also demonstrate cross-institution and inter-departmental working.

▸ Given that SMEs are significantly greater in number than their multi-national counterparts, make research and activity funding more available to encourage better engagement between graduates and SMEs.

▸ Encourage the formal publishing of practice and research carried out by employability professionals to disseminate exemplar practice. Engagement and publishing of action-research should be encouraged amongst those practitioners who have an intimate understanding of the agenda and the barriers to student and employer engagement.

University management, faculty/department heads, heads of careers and employability services

▸ Consider what further support mechanisms can be made available to encourage and facilitate greater numbers of students a] to engage in outward mobility and b] reflect effectively on the benefits of an international experience on career prospects, for example, offering a greater number of exchange programmes with partnering universities and companies.

▸ Degree programme convenors should progress beyond citing generic knowledge, skills and attributes in programme specifications and consider methods to assess the level of which these learning outcomes have been acquired to the same degree that discipline-specific learning outcomes are assessed.

▸ Enhance management structures and governance procedures to ensure that various directorates are working together more effectively in meeting the needs of various key stakeholders associated with the employability agenda.

▸ Apply predictive analytics approaches using legacy performance data of previous cohorts (e.g. engagement levels in employability-enhancing activity, work-based learning and graduate destinations etc.) to help students inform their own career planning and propensity for securing graduate-level employment upon leaving HE.

▸ Engage SMEs and alumni as proactively as multi-national employers to expose students to a wider range of career opportunities.

▸ Engage with national careers service agencies e.g. AGCAS, NACE and graduate recruitment associations to continually enhance service provision and share knowledge between universities and graduate recruitment professionals.

This summary aims to provide broad recommendations that might be drawn from the common and more frequent conclusions that have emerged from the literature. It is not designed to be exhaustive. To fully understand the rationale for their inclusion the reader is directed to the main body of the report.

Introduction

Context

The purpose of this report is to provide a review of the literature associated with the practice and strategies used to improve the employability levels of students and graduates during and immediately following their experiences within Higher Education (HE). In reviewing literature most relevant to this agenda, the report intends to facilitate the sharing of best practice and innovation that exists across the global Higher Education landscape, and to surface the influences that are driving this agenda.

Specifically the review seeks to highlight literature relating to both sides of the University-employer interface. The scope of the report includes practice delivered via the curriculum, extra-curricular interventions and support services, and examines partnerships and approaches to employer-engagement, including the theories and strategic drivers that underpin the rationale for delivering these activities. The review also aims to provide a better understanding of where and how impact is robustly measured and the limitations of such evaluation methods. This approach has been taken to inform further thinking about strategic policies and interventions that will assist in the development of the next generation of employability ecosystems and partnerships between Higher Education Institutions (HEIs), employers, government agencies and other external stakeholders.

Throughout the review we have sought to include and highlight examples of best practice from around the globe. There is, however, a noticeable dominance in UK, North America and Australian examples within the literature reviewed. This may be indicative of a more established and prolonged history of career and employability service provision and 'communities of practice' existing in these countries, and subsequently a greater body of knowledge and practice published over a period of time. Additionally, the prevalence of the English language across the UK, North America and Australia may lead to the practices from these countries being more widely distributed and shared. Brewer (2013, p.7) also highlights a bias in the literature around skills development, stating that "most of the research in this area has [also] been conducted in industrialized countries".

The literature review is especially timely, given that universities across the world face mounting pressures to increase graduate employability and associated employment outcomes (Arrowsmith,

Bagoly-Simó, Finchum, Oda & Pawson, 2011; BIS, 2011; EACEA, 2015; Jameson, Strudwick, Bond-Taylor & Jones, 2012; Taylor & Hooley, 2014). In discussing this agenda across a constantly changing global landscape, commentators have described the following factors for consideration:

1. Globally shifting graduate labour markets and challenging economic conditions;

2. A drive to attract international students and to 'internationalise';

3. The changing landscapes of student tuition fees and finance;

4. Changing attitudes towards 'mass' engagement or participation in Higher Education; and,

5. The resultant shift in student expectation (See BIS, 2011; McNair 2003 cited in Taylor & Hooley, 2014).

These factors have prompted an institutional shift towards, what has been termed, 'decentralized centralization' (Shin & Harman, 2009). This term describes the move towards both enhanced institutional autonomy, and at the same time, increasing levels of institutional accountability to both governments and educational consumers. This balancing act has left the field of career services and employability provision in need of new, updated, and adaptable methodologies and practices in order to meet the growing expectations of students, parents and the labour market. Examples of such provision and approaches will be reviewed within this report.

Chapter overview

This literature review is structured around four key research areas associated with the HE employability agenda. In each instance, we have sought to illustrate the contemporary context of the literature, before highlighting key areas within the materials reviewed. With an eye to assist practitioners, we highlight best practice and include several prominent case studies in each section.

The review begins by exploring literature that discusses how HEIs might design, develop and implement a coherent employability programme (pp. 13-21), and examines the breadth of employability provision delivered within institutions. More specifically, the review explores: curricular development (pp. 24-30), pedagogical practice (pp. 30 - 32), and the skills that employers demand and applicants need (pp. 33 - 44). Finally, the modes and mechanisms through which institutions engage with employers are also reviewed (pp. 47 - 61). This literature review is the first phase of a project which will culminate in a 'thought leadership' paper designed to facilitate a greater understanding between key stakeholders engaged in the development of employability ecosystems. Therefore, in the concluding section of this report, we suggest key areas that are emerging from the literature and look to future directions of employability service provision.

For ease of use, brief synopses of the sections within this report are as follows:

SECTION ONE: How are HEIs developing coherent employability programmes

This section provides an overview of the literature, examining a notable shift in HE career service provision across the globe. Where career services were once marginal, they are increasingly being integrated into and across institutions via 'ecosystem' or 'holistic' approaches. In addition to promoting this approach, the literature includes strategies and practices around:

‣ Developing and using alumni networks;

‣ Sharing best practice and impact data within and beyond the institution; and,

‣ Encouraging the flexible provision of career services in order to maximise stakeholder engagement and the impact of career and employability service provision.

SECTION TWO: Best practice methods of embedding employability skills into the curriculum, and the importance of pedagogy.

This section seeks to highlight literature that addresses best practice methods of embedding employability into the curriculum alongside a discussion of the pedagogy (or 'teaching and learning') of employability skills. Principally, it reviews literature that focuses on examples of employability models that directly engage with academic learning. The section features discussions of bolt-on employability programmes and embedded practices. It includes examples from the literature that have sought to synthesise best practice approaches of careers and employment support within curriculum development and wider pedagogical practice within HEIs.

SECTION THREE: What graduate employability skills do employers value?

This section evaluates the employability skills that are most valued by employers around the world. It looks at the specific skills that are most frequently highlighted in the literature reviewed, such as communication and commercial awareness before turning to broader contextual changes. These include the development of the need for global competencies, and the engagement of national skills strategies. The section concludes with a selection of models that have sought to open up the idea of 'what' and 'how' employability skills are developed in order to allow such attributes to be readily understood by students and practitioners alike.

SECTION FOUR: How can HEIs and employers build closer working relationships?

This section considers the ways in which HEIs can build collaborative partnerships with employers. In so doing, it first makes the case for HEI-employer collaboration, referencing both the global 'skills shortage' and inconsistencies in HEI and employer understandings of graduate 'work-readiness'. It goes on to outline the benefits of HEI-employer collaboration for both the HEI and employer partners. It proceeds to list the types and varieties of HEI-employer collaboration, before presenting a number of global case study examples of best practice. Finally, this section will provide an overview of literature which captures the challenges and obstacles facing partners in HEI-employer collaborations.

SECTION FIVE: How is impact measured?

Within and beyond HE institutions there are a series of metrics and mechanisms used to compare and assess the quality of careers and employability provision across different institutions. This section provides an insight into these relevant metrics, including: league tables, graduate destination surveys, quality assurance agency recommendations, awards programmes, and the emergent empirical studies in academic articles and publications. It goes on to briefly reflect upon the limitations of such metrics.

SECTION SIX: Directions

In the concluding section of this report, we suggest key areas that are emerging from the literature and look to future directions of the employability and employer-liaison agenda and its explicit embedding across all parts of the HEI. This section evokes the assertion from the literature that "where the various offerings of HE are integrated – informing and shaping one another – then they stand a greater chance of long term success" (Bolden et al., 2009, p.45; see also Cole & Tibby, 2013; UKCES, 2009). The idea of the wider ecosystem within and external to HE is discussed as a result. The section also looks towards the future, in terms of the rising importance and influence of internationalisation upon HE and the opportunities for HEIs in further understanding the differences between the needs of SMEs and multi-national organisations. Suggestions are also made regarding the need for further examination and development of instruments that allow the effective measurement of impact provided by employability and employer engagement services.

Key stakeholders

This review is primarily designed to inform and influence practice as well as wider policy making. Examples of best practice and associated commentary are identified, highlighting noticeable gaps and limitations of career service provision where they are evident in the literature.

Stakeholders include the wider network of groups who are interested in the employment of university graduates (such as career practitioners, senior University management, academics, graduate employers, employees and, of course, students themselves). This review highlights salient details for informing decision-making and policy within the sector of HE and those responsible for its governance.

Methodology

In this review we have included a wide selection of materials in order to gain an understanding of best practice in employability provision across the world.

In attempting to review employability provision and employer-engagement literature on a global scale, there are clear limitations to such research. One fundamental challenge for a literature review such as this is that career practitioners working within HE careers and employability services, placement offices and student entrepreneurship units are principally employed to deliver services directly to their constituents (students, employers, and academics). In addition, 'Professional Services' employees are less likely to formally publish theoretical 'think pieces', approaches to researching impact, or case studies, in the way that their academic colleagues are likely to be encouraged and incentivised. Increased competition between HEIs around the world may also dilute the incentive to share good practice due to issues surrounding commercial sensitivities. The same argument could also be applied to those employees working in the field of Human Resources, student and graduate recruitment and graduate development.

That is not to say that there are not professional communities of practice in existence that allow such experiences and expertise to be shared and disseminated. This review cites examples of such associations and the work of centres of related 'applied research'. However, the method of disseminating such practice can often be restricted to news items in trade association magazines, short case studies, and presentations. This review has cited such examples but there is clearly a huge body of knowledge and experience residing within these 'communities of practice' that require further and more appropriate research methodologies, formalised peer review, and robust scrutiny.

Definitions

> *Employability: A combination of knowledge, competences and personal attributes that make graduates more likely to gain employment and progress during their career."*

Education, Audiovisual and Culture Executive Agency (EACEA). Eurydice brief: *Modernisation of higher education in Europe* (2015, p.15)

This section provides definitions of both 'employability' and 'employability skills'. It reflects the literature's propensity to refer to both graduate employment outcomes and skills or competencies, when defining and discussing graduate employability.

Defining: "Employability"

Employability is becoming a core issue in many countries, and increasing attention is being paid "to the role of higher education in developing employability" (Huang, Turner & Chen, 2014, p.177; see also HEFCE, 2011; QAA 2014a, 2014b). Despite the increasing focus and attention, the term employability has many meanings that vary greatly around the world (BIS, 2011; Huang et al., 2014). Commentators defining employability are quick to

highlight that 'employability' cannot be reduced to employment, and instead encompasses the development of a "combination" or "set of achievements" of skills, knowledge, understanding, and personal attributes; that together make a graduate more likely to gain and remain in employment (EACEA, 2015; Harvey, 2003; Mason, Williams & Cranmer, 2009; Yorke, 2006).

This broader conception of employability, as that based instead upon "values, intellectual rigour and engagement" (Hinchliffe & Jolly 2011 cited in Pegg, Waldock, Hendy-Isaac, and Lawton, 2012, p.19) , reflects the term's shift from "employ" to the wider issue of "ability" (Harvey, 2003; see also Tran, 2015). As such, employability is understood as an attribute enabling success within employment and also life more widely, hence employability skills being referred to 'skills for life' (Cole & Tibby 2013; Dearing 1997). Within this wider definition, employability is also considered in terms of its societal contribution and benefit to a range of stakeholders beyond the student, such as the workforce, community, and economy (Bowden et al., 2000, and Knight & Yorke, 2004, cited in Cole & Tibby, 2013, p.6; Yorke, 2006). This conception of employability has been visualised in Figure 1.

This broader and outward-facing conception of employability has also been accompanied by an inward focus on unpacking employability skills.

- Key Stakeholders
- Secondary Stakeholders
- Benefits

- Income generation
- Knowledge exchange
- Status and reputation
- Current and relevant curriculum
- Responsive provisions

- Flexible learning opportunities
- Access to facilities
- Workforce development

Local Community

Employees

- Upskilling
- Workforce development

Higher Education Providers

- Ready skilled workforce
- Access to knowledge, facilities and services
- Commercial Advantage
- Access to responsive provision to support upskillng workforce

Employers

Students

- Increased employability
- Current and relevant skills, knowledge and experience
- Options to develop workplace relevant skills

Economy

- Economic recovery

Figure 1. Stakeholders in employability (QAA, 2014a, p.5)

> " *The skills, knowledge and competencies that enhance a worker's ability to secure and retain a job, progress at work and cope with change, secure another job if he/she so wishes or has been laid off and enter more easily into the labour market at different periods of the life cycle."*

International Labour Organisation (ILO) *Enhancing youth employability: What? Why? and How?* (2013, p.iii)

As mentioned in the definition of 'employability' above, this section outlines several dominant ways in which 'employability skills' are more specifically defined. It is important to note that definitions of 'employability skills' are wide ranging and are often used without clarification. This definition therefore will be a useful tool and point of reference in the following sections of this report.

This report seeks to define employability skills as related to higher education, and as such, other sectors and approaches to employment are not included. In *"Forging Futures: Building higher level skills through university and employer collaboration",* (UKCES, 2009, p.9) define employability *as "the skills that make specific knowledge and technical skills fully productive"*. This definition highlights the importance of the transformation of academic knowledge into action, or to use UKCES' term – production. Mason (2009, p.1) argues that employability is usually understood as 'work- readiness', therefore employability skills could be understood not only as the possession of knowledge, but also as a commercial understanding that enables graduates to make productive contributions to the workplace.

Although scholars have developed many frameworks to accommodate essential employability skills, Sung (2013, p.185) cites the "4Ms criteria" as an example of a strong framework. This criteria was designed by the Singapore Work and Development Agency (WDA) and captures the overarching goals of employability skills as follows:

> ‣ **Move into**: from unemployment into a job;
>
> ‣ **Move up**: an employed worker moving up to undertake a bigger or higher job;
>
> ‣ **Move between**: an employed worker moving between jobs or companies in the same industry;
>
> ‣ **Move across**: an employed worker moving across to a new industry to seize growth and career advancement opportunities.
>
> (Sung, 2013, p.185)

The 4Ms detail how employability skills are expected to encourage employment and career promotion in the labour market. The mobility of workers in a global context of employment will be discussed further in Section Three.

Section One:

> ❝ *Getting the development of employability skills right is a holistic challenge.”*

UK Commission for Employment and Skills (UKCES), *Forging Futures: Building higher level skills through university and employer collaboration* (2009, p.16)

How are HEIs developing coherent employability programmes?

This section of the report will provide an overview of literature exploring how universities might design, develop, and implement a coherent employability programme in their institution. It begins by reviewing literature reflecting on the changing environment and landscape of university careers and employability service provision. After outlining what has been proposed as a 'new paradigm' in career service provision, this section then explores a series of institutional practices and strategies accompanying the shift. In the sections that follow this one, two additional key areas of employability service provision, namely the curriculum (see pp.24-30), and institution-employer relationships (see pp.47-61), are explored, as these areas have attracted considerable interest in both literature and praxis.

Institutional approaches

Context: career service provision

In reflecting upon how HEIs might design, develop, and implement a coherent employability programme, it is useful to first consider the history of such service provision. Dey and Cruzvergara (2014) provide an insightful overview of the history of career service provision, beginning with vocational guidance in the early twentieth century, and tracing a number of shifts in modes of service delivery through to what they propose as the current and emergent service delivery paradigm of 'connected communities' (see Figure 2).

1900-1920	1920-1940	1940-1970	1970-1990	1990-2010	2010-2030
Vocational Guidance	Teachers Guidance	Job Placement	Career Counseling	Professional Networking	Connected Communities
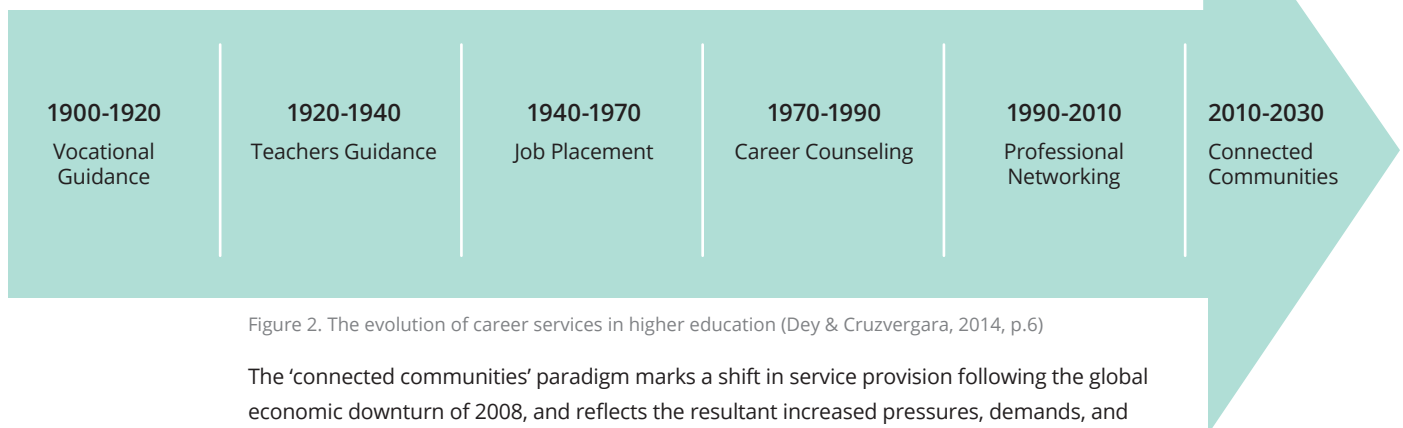
Figure 2. The evolution of career services in higher education (Dey & Cruzvergara, 2014, p.6)

The 'connected communities' paradigm marks a shift in service provision following the global economic downturn of 2008, and reflects the resultant increased pressures, demands, and service alterations faced by university career departments and facilities (Dey & Cruzvergara, 2014, p.8). In exploring the trends included in this emergent paradigm, Dey and Cruzvergara identify a shift from a singular or standalone careers service, to one that is instead, "becoming an ecosystem" (p.11). The support of an 'ecosystem' approach to careers and employability provision can also be understood as advocating a holistic approach as it "permeates the culture and experience" of an institution *(ibid)*.

Holistic and 'ecosystem' approaches to employability

Holistic or 'ecosystem' approaches to career service provision have been discussed across a number of recent publications (BIS, 2011; Cole & Tibby, 2013; UKCES, 2009, 2014). Each of these sources propose and outline different approaches to defining and implementing a careers 'ecosystem'. Dey and Cruzvergara (2014, p.9), for example, describe an 'elevation of career services', in which career service professionals are being afforded increasing "institutional influence" and intervention capacities. In practical and logistical terms, such an 'elevation' is said to involve the redesign of organizational structures and reporting lines (Dey & Cruzvergara, 2014, pp.8-9). Such alterations are proposed to encourage the embedding of employability initiatives within, across, and beyond the institution; facilitating the engagement of internal and external stakeholders (Dey & Cruzvergara, 2014, pp.9-10).

The Department for Business Innovation and Skills (BIS) (2011, p.7) report exploring the "development of employability skills in the UK [United Kingdom] and in an international setting" presents a series of best practice examples across international HE

institutions.[1] The report puts forward key recommendations that involve promoting both the collaborative and active involvement of career services in the formation of 'institutional strategies', and the importance of communicating a "common set of principles" regarding employability across the institution (pp.98, 93). As a result, the report identifies the importance of ensuring that a clear and consistent definition of employability is circulated and understood across the institution and beyond, to "employers, academic staff, career advisory staff, students and parents" (p.11).

Further notable publications in this area include the United Kingdom Commission for Employment and Skills (UKCES) (2009) report entitled "*The Employability Challenge*", and more recently, the Higher Education Academy (HEA) commissioned report by Cole and Tibby (2013) entitled "*Defining and developing your approach to employability*". These publications are of particular note since they include a series of useful practical resources and info-graphics, neatly summarising distinct approaches and frameworks concerned with designing, developing, and implementing coherent and holistic employability ecosystems within an institution.

The UKCES (2009) report states that developing employability skills across an institution is a 'holistic challenge'. In order to broach this challenge, the report outlines a holistic framework in the form of an "employability wheel" (p.17) (see Figure 3).

Figure 3. Employability Skills Wheel (UKCES, 2009, p.17)

The 'employability wheel' seeks to unpack the critical and high impact factors involved in a holistic approach to the institutional provision of student employability services. The 'inner circle' of 'critical factors' is comprised of: 'employer involvement', 'leadership and resources', and 'programme design and delivery'. Due to their individual significance the first and last of these 'critical factors' will be discussed in further detail in separate sections of this report (see sections two and four respectively). Included within the 'leadership and resources' segment are "the development of an institutional culture supportive of employability", and "a whole organisation approach", as well as an investment in resources. The report notes that whilst this agenda may appear 'simple', it is in reality a complex process to deliver, and requires strong and consistent institutional support and leadership to ensure successful holistic service provision (UKCES 2009, p.16). As such, the report identifies a series of useful 'actions' for strong leadership and to ensure the embedding of employability goals across an institution (Figure 4).

Alongside the importance of strong leadership in embedding employability across an institution, the UKCES (2009, p.32) report also reflects upon the importance of developing the skills of existing staff to engage with, develop and deliver employability services. The report refers to the example of Birmingham City University in the UK, who "operate a dedicated unit to design and deliver workshops for academic staff to enable them to enhance personal development planning and employability provision" *(ibid)*. The message around the importance of a multi-faceted and holistic institutional approach to the development and embedding of employability provision into the "cultural norm" of an institution has also been advocated in the more recent UKCES (2014) report.

In their report "*Defining and developing your approach to employability*", Cole and Tibby (2013) provide further practical guidance in the development of a coherent institutional approach to employability service provision. They outline a series of crucial areas for consideration throughout the process of developing and implementing effective employability strategies, including: establishing what the "interpretation of employability is, how it can be translated into practice, how students and staff can be engaged with this, current practice and gaps in provision, and how to monitor progress" (p.5). Cole and Tibby express the importance of implementing a 'flexible' framework allowing for the reflexive process of "discussion, reflection, action and evaluation" (p.5). Their four-step iterative framework is neatly visualised in Figure 5.

Leadership and resources action list

1. Build up a whole-institution employability culture in which students are practising employability from the moment they walk through the door, and in which employability is understood to be everyone's job – employability a part of "core business".

2. Identify an articulate the institution's vision and values.

3. Communicate vision and values consistently over the long term, building them into foundational documents (missions statement, strategy, guidance notes, etc) of the institution, and into target and incentive structures.

4. Be willing to move the institution, and the professionals within it, out of their comfort zone.

5. If necessary, reallocate time and money into employability skills

6. Be prepared to defer success in order to create a culture and institutional capability of lasting value.

7. Develop capacity in employer involvement, either by developing existing staff or by recruiting specialists.

8. Build strong and genuine relationships with employers, students and staff, and be resolute in seeking, hearing and acting on feedback.

9. Treat employability skills as the complex specialism it is, and invest accordingly in staff, CPD, and infrastructure.

10. Provide the necessary resources and professional development, if necessary at the expense of doing something else.

11. Assess development of skills in more qualitative and subjective ways than may be usual.

Figure 4. Leadership and resources action list (UKCES, 2009, p.34)

In addition, Cole and Tibby also provide a range of action-plan resources to kick-start the process of self-assessment required to design, develop and implement such an approach. These include advocating the use of models such as 'Career EDGE', which is described as a valuable tool for explaining the concept of employability to a range of stakeholders, as well as useful for promoting evaluation and reflection for those involved in service provision (p.8)[2]. Importantly, Cole and Tibby stress that the models and resources described are not necessarily prescriptive, and can and should be adapted, depending on institutional cultures and service provision goals (p.4).

These publications together demonstrate a shift in the understanding of institutional practice regarding the positioning of career and employability service provision. But how pervasive is this shift across a wider global context? As part of the BIS (2011) report, career service advisers across 25 countries were asked how important the development of student and graduate employability was within their institution. The BIS report demonstrated the increasing 'holistic' importance of student employability, highlighting that it is considered 'very important' within career services, and 'important' within both the curriculum and across the broad aims and objectives of the institutions sampled (p.59) (see Figure 6).[3] The BIS report concluded that "employability has moved from a 'marginal' concern of career services, into a more general 'mainstream' concern for institutions as a whole in many parts of the world" (p.59).
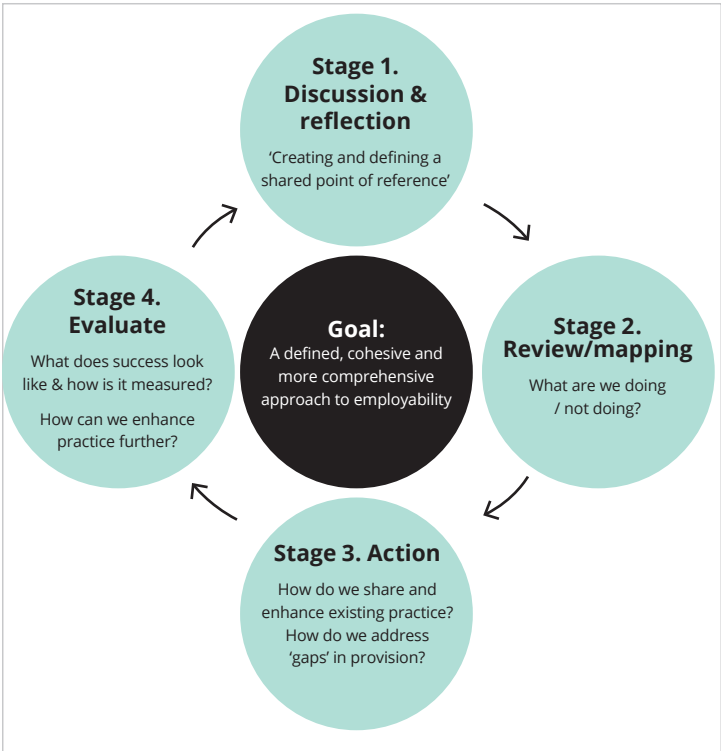
Figure 5. Framework for employability (Cole and Tibby, 2013, p.10)

Whilst there are of course differences across parts of the world, there is nonetheless a notable and international shift towards embracing a more holistic approach to career services provision.
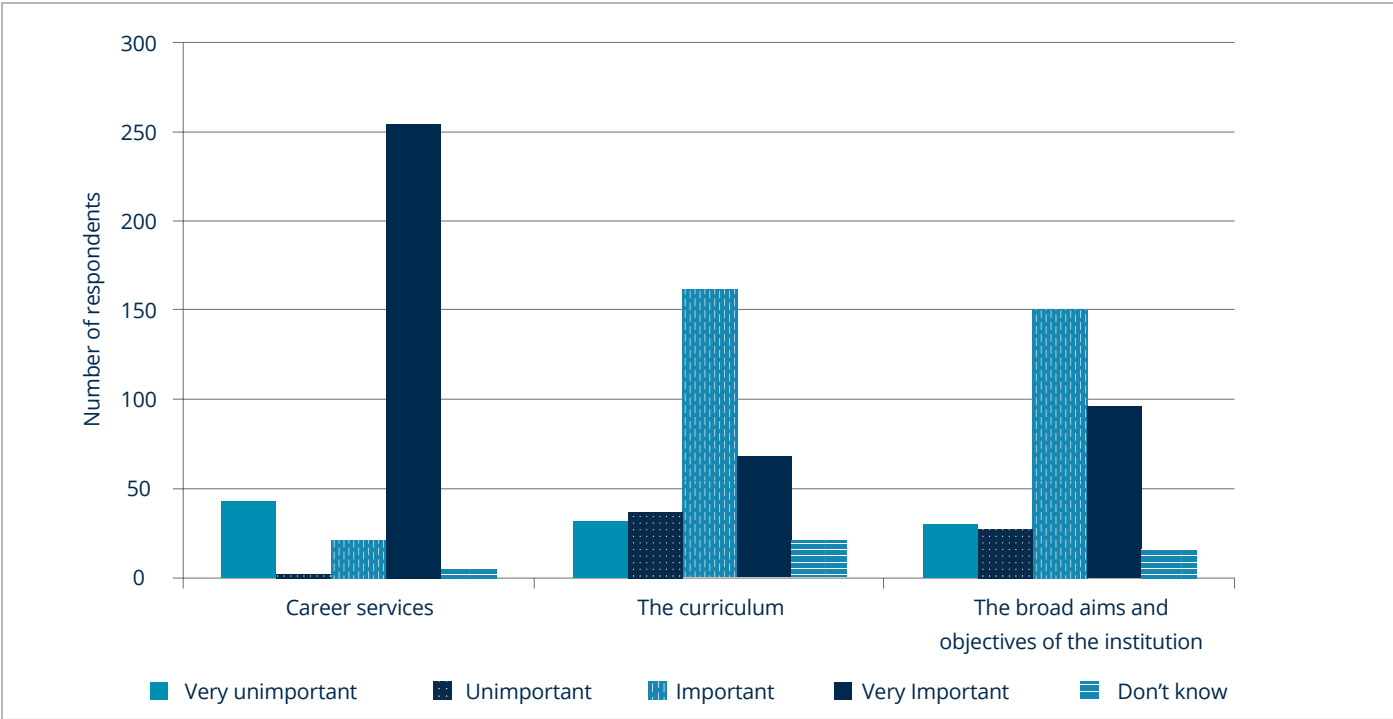
Figure 6. Respondents surveyed on how important the development of student/ graduate employability is in each of these locations or contexts (BIS, 2009, p.59)

[2] The CareerEDGE model will be discussed further in section three of this report, see p.44.
[3] Whilst the BIS (2011) report surveyed 414 career advisory staff from institutions in 25 countries, the base number that answered this question was 317.

Other institutional strategies

The literature advocating a holistic or ecosystem approach to university employability service provision also discusses and outlines a series of additional institutional practices and strategies to best implement such an approach. These include:

▸ Developing and utilising alumni networks;

▸ The importance of the sharing of best practice and impact data within and beyond the institution; and,

▸ Flexible service provision.

Also included are the integration of employability provision into the curriculum, and the involvement of stakeholders such as employers in the design and delivery of employability provision. As previously noted, these areas will be explored in separate sections of the literature review (see sections two and four).

Developing and utilising alumni networks

In conjunction with advocating a holistic or ecosystem approach, a number of publications are recognising that employability is a "lifelong process" (Cole & Tibby, 2013, p.5), and as such are recommending that institutions consider and engage alumni networks within their employability frameworks. For example, as part of their 'connected communities' thesis, Dey and Cruzvergara (2014, pp.10-11) note the increasing recognition of the importance of intra- and inter-institutional connectivity and collaboration, including the engagement of external stakeholders, such as alumni. They also note the importance of engaging "alumni for a lifetime", and not merely for a short period following graduation (p.8).

The value of this approach is reflected in the BIS (2011, pp.8, 69) report, which proposes that alumni relations are well established across many global institutions, and that "77% of respondents [surveyed] agreed that graduates would be allowed to access employability activities for ten years or more following graduation". Whilst this high percentage-figure is encouraging in signalling the value and uptake of alumni engagement, it should be noted that the distribution of this alumni engagement varies globally. The report notes, for example, that alumni engagement is higher in countries such as the United States and Finland when compared to the UK, with these countries offering a more "open-ended commitment to graduates" and maintained contact with alumni for a consider post-graduation period (BIS, 2011, pp.69, 28). The report presents a number of international case study examples, including the Loyola University, in Chicago, United States, in which the career services work with the alumni association in order to coordinate

a range of events and workshops, including "mock interviews, specialised talks, [and] careers fairs" (p.69). Ultimately the report recommends that "institutions should review their alumni relations approaches to optimise their subsequent engagement", considering especially the role of alumni in the provision of schemes such as "work placements and [as] mentors" (pp.69-70).

In addition to reviewing such publications, this report seeks to include notable communities of praxis in its literature overview. One such notable community, established around the importance of cultivating relationships with alumni as a strategic institutional tool, is the German-speaking collective Alumni Clubs Net[4], with more than 500 members including alumni organisations and universities. This community displays a wealth of resources regarding alumni relations, and lists amongst their objectives the promotion of the sharing of best practice, and the exchange and sharing of concepts across universities, alumni associations, and other relevant institutions (Alumni Clubs Net 2015).

The importance of the sharing of best practice and impact data within and beyond the institution

In conjunction with promoting a holistic or ecosystem approach, a number of publications are recommending the sharing of best practice and impact data both within and beyond institutions. For example, The Higher Education Funding Council for England (HEFCE) have encouraged institutions to "publish statements on the outcomes of their strategies for prospective students via public outlets" such as the Unistats website (BIS, 2011, p.18).[5] This sentiment around the communication of goals and best practice was more recently revisited and echoed in the 'suggested ways forward' section of the UK Quality Assurance Agency for Higher Education (QAA) report entitled "*Employer Engagement: Emerging Practice from QAA reviews*". In this report, the QAA (2014a, p.6) recommended that whilst many examples of best practice have been identified, the sharing of this practice "throughout the institution" could be improved upon.

In addition to sharing best practice within and beyond the institution, a number of publications discuss the growing importance of institutional impact data or measures of success. For example, Dey and Cruzvergara (2014, p.11) suggest that "the ability to effectively collect data and craft a compelling story will become a standard operating practice" across HE institutions. In noting this, Dey and Cruzvergara refer to several case studies examples in the United States, including: Stanford

[4] See www.alumni-clubs.net/

[5] For further information regarding HEFCE's recommendation for employability statements see their circular letter to "Heads of HEFCE-funded further education colleges, [or] Heads of HEFCE-funded higher education institutions": www.hefce.ac.uk/pubs/year/2010/cl,122010/

University who now "measures the reputation of its career center and staff using a net promoter score, a popular metric in the retail and business", and "Carnegie Mellon, George Mason, and [the] University of Miami, [who] are replacing their long annual reports with dynamic info-graphics that give life to data and tell the university's story in a powerful way" (p.12).

Whilst league tables and other external career service measurements data or metrics provide a valuable narrative, Dey and Cruzvergara (2014, p.12) suggest that such sources tell only a "part of the story", and propose that career services must provide their own metrics showcasing "additional value", "reputation", and stakeholder engagement. Dey and Cruzvergara also note that there remains some hesitancy on the part of some career services with regard to the sharing of data and best practice, but propose that the "most successful career centers will be those that embrace the occasion to play a lead role in the collection and dissemination of information" (pp.12-13). The topic of measuring employability metrics and impact will be discussed further in section five of this report.

Flexible service provision

The flexible provision of careers and employability services has also been identified by a number of publications as a crucial aspect of successful holistic institutional service provision moving forward. For example, the "creation of flexible approaches to delivery" is depicted on the aforementioned 'employability wheel' (UKCES, 2009, p.17).

Flexible delivery is, however, approached differently across a series of publications in the area. For example, Simpson and Ferguson (2013) approach flexible provision as key in response to global goals around the engagement of *all* students in employability service provision, and explore the inclusivity and engagement of 'disadvantaged' students in the provision of careers services at La Trobe University in Australia. Simpson and Ferguson assess a series of careers provision delivery modes, and conclude that the 'award programme' was more highly attended by 'lower socio-economic status' students than the careers workshops. Simpson and Ferguson suggest that this is the case because the award programme can be carried out in the student's own time around other commitments and on or off campus, thus also offering a greater degree of "flexibility across time and physical space" (p.47). Whilst highlighting and acknowledging the continued importance of "traditional programmes" or modes of careers service provision, Simpson and Ferguson stress the importance of delivering such

programmes "as flexibly as possible" in order to be inclusive and foster student engagement (p.47). This inclusivity and flexibility is stressed as both increasingly and especially significant in the current climate of "greater graduate competitiveness" (p.46).

Greenbank and Hepworth (2008, p.42) similarly call upon institutions to reflect upon the reasons that some students are reluctant to engage with career services, detailing a range of scenarios and thinking points for institutional and practitioner consideration (see also Greenbank, 2011). Similarly exploring flexibility of service provision, Das, Do and Chan (2014, p.98) present a study detailing a flexible and "inexpensive careers intervention" in the form of the distribution of a fortnightly tailored e-newsletter to students. In so doing, Das et al. suggest that the reception of said newsletters may have produced an effect on student "early career confidence" (p.98).

Taking yet another approach to flexible service provision, Dey and Cruzvergara (2014, p.10) urge institutions to reflect upon the changing access that students have to digital or web-based employability information and content. They propose that in the current 'connected communities' paradigm of career service provision, "gone are the days of transactional services and general career information" *(ibid)*. Dey and Cruzvergara suggest that accompanying the wealth of online careers information is a shift in student expectation to now seeking the provision of "customized information that will be specific to their needs or desires" *(ibid)*. As such, they envisage a future in which "career services professionals can transform their offices into hubs of connectivity and provide more tailored advice, strategy, and feedback to their constituents" *(ibid)*.

Conclusions

This section has sought to provide an overview of literature examining the provision of career and employability services in HE institutions. It has highlighted a notable shift across numerous global institutions in which the once marginal career services are increasingly leading or being integrated into a holistic institutional strategic approach. In addition to promoting this holistic or ecosystem approach, publications in the area have also promoted strategies and practices around: developing and utilising alumni networks, the importance of sharing best practice and impact data within and beyond the institution, and encouraging flexible provision of career services in order to maximise stakeholder engagement and the impact of related provision. The ideas introduced around the ecosystem will be raised again in Section Six in an assessment of 'Future Directions'.

Section Two:

Best practice methods of embedding employability skills into the curriculum, and the pedagogy of employability skills

Introduction

The previous section of this review identified a shift towards a holistic or ecosystem approach to careers and employability provision. In doing so, it noted that such literature highlighted the curriculum as a crucial channel to enable the delivery of such an approach. This section, therefore, seeks to highlight literature that explores the relationship between career services and academic departments. Methods of best practice are discussed in the embedding of employability skills in these areas. Included are case studies which highlight best practice employability models around the world, and analysis which provides further insight and clarification into how relationships between career services and academic departments function. This section provides a review of literature that directly engages with academic learning. It focuses on examples which have sought to synthesise approaches of careers and employment support within curriculum development, and the implementation of wider pedagogical practice in HEIs.

This section will explore the methods and mechanisms through which employability skills and awareness are embedded and practiced within an academic context. A discussion of which employability skills are specifically and most valued are highlighted in section three on pages 33-45. As Mason et al (2009, p.2). observe in "*Employability skills initiatives in higher education: What effects do they have on graduate labour market outcomes*" some academic departments have "sought to 'embed' these desired employability skills within courses". In other departments students are offered 'stand-alone' skills courses that are effectively 'bolted on' to traditional academic programmes whilst other are co-curricular in nature and fall between the two models. Both approaches will be reviewed in this section. The literature reviewed in this section is predominantly published post-2009, and reveals a growing tendency towards ideas of embedded practice, which are now dominating contemporary discussions around the curriculum and employability across the globe. Much like the proposition of "connected communities" (Dey & Cruzvergara, 2014, p.10) that are detailed in section one, integration and co-operation seem to be the most prevalent forms of best practice examples of careers provision within the curriculum.

Current context

> 66 *The recession — and the resulting increase in competition for jobs — throws into sharper focus the imperative for graduates to have the attributes to succeed in the workplace."*

Richard Lambert, Director-General CBI, qtd. in *Future Fit – preparing graduates for the world of work* (UUK/ CBI, 2009, p.2)

This literature review has found that there is a dearth of research that thoroughly investigates employability across a truly global context. Nonetheless, there are several reports that cite employability contexts across the world. Reading and analysing such reports collectively allows for a picture of the current context of employability across the globe to be developed. For example, throughout these internationally focused papers, there are a number of recurrent factors listed, including economic recession, and the underemployment of graduates. This context has, paradoxically, been accompanied with a "skills shortage" (Mourshed, Farrell & Barton, 2012, p.11). In their report, "*Education to Employment*", Mourshed et. al. (2012) highlight the context of skills shortages across the ten countries that are the focus of their report (Brazil, Germany, India, Mexico, Morocco, Turkey, Saudi Arabia, United Kingdom, and United States). The report importantly identifies that "only 43 percent of employers surveyed agreed that they could find enough skilled entry-level workers" (p.11). These barriers to applying best practice within increasingly competitive and international job markets are discussed in this section.

> " In Japan, an estimated 700,000 young people, known as hikikomori, have withdrawn from society, rarely leaving home. In North Africa, restless youth were at the vanguard of demonstrations that toppled governments in Egypt and Tunisia. In the United States, the still-faltering economy has been so difficult on Generation Y that there is even a television show, Underemployed, about a group of 20-something college graduates forced into dead-end or unpaid jobs. It is a comedy, but of the laughter-through-tears variety."

Figure 7. Understanding the Global Employment Context (Mourshed et al., 2012, p.10)

UK context

Within this review, pedagogy and practice from the UK tends to emerge as a forerunner in terms of both quality and the quantity of examples cited as best practice. Therefore, a brief introduction to the UK context is provided by way of introduction to understanding the contemporary thinking around curriculum development and the pedagogy of employability skills.

The landscape of higher education is undergoing a process of rapid change in the UK. Much like its transatlantic counterpart in the U.S.A., privatisation of HE is a significant trend in the United Kingdom. Whilst the U.S.A is further down the path of 'free market' education with the costs being shouldered by individuals as opposed to the state, UK policy-making indicates a change from public to private financing in HE (Amsler, 2011, p.62). Since the publication of the "*Independent Review of Higher Education Funding and Student Finance*" (commonly known as "*The Browne Review*") in October 2010, there has been an emergence of increasingly urgent and frequent discourses around employment prospects across all disciplinary areas of Higher Education. As Bulaitis (2014, p.7) highlights "the Browne report suggested significant changes to the funding of education, and in effect created a marketized system of universities that are driven by competition and consumer desire". Post-Browne, in a field of Higher Education that specifically seeks to place "students at the heart of the system" (Browne, 2010, p.4) the focus of employability practice is accountable to the individual student.

Traditionally the planning and management of careers was considered to be the responsibility of the individual (Baruch, 2006). As Tomlinson (2007) observes, employability and career progression were largely viewed as being a problem for graduates rather than HE providers. The managing of employability and careers was determined by the individual graduates themselves, and their future in the labour market lay mainly in their own hands (Bridgstock, 2009; Li, 2013). In the current climate, students are increasingly commercially aware, and enter Higher Education in order to secure better job prospects and careers in the future. The Higher Education Funding Council for England (HEFCE) relates this change in UK Higher Education specifically to employability practice, stating:

> *Embedding employability into the core of higher education will continue to be a key priority of Government, universities and colleges, and employers. This will bring both significant private and public benefit, demonstrating higher education's broader role in contributing to economic growth as well as its vital role in social and cultural development."*

(HEFCE, 2011, p.5)

Curriculum best practice review

The review of literature exploring curricular best practice around employability is divided into two sections. The first section discusses 'bolt-on' studies, exploring the addition or bolting on of employability skills 'modules' to academic programmes. The second section explores the practice of embedding employability provision within the academic curriculum. In the assessment of literature around these two dominant approaches there will be a discussion of present barriers to delivering best practice. In both instances, these barriers centre upon difficulties surrounding the sharing of employability best practice across institutions, countries and continents. This review of curricular best practice concludes with literature that looks to the future, providing potential suggestions for Continuous Quality Improvement (CQI) and impact across the global HE landscape.

Bolt-on studies

The term 'bolt-on' studies is used to represent activities that sit outside of specific academic modules, but still relate to the curriculum. Bolt-on studies include extra-curricular opportunities, workshops, or optional courses that students are able to take. As such, bolt-on studies are often not a part of the essential credit-bearing modules in a degree programme.

Diamond et al. (2008, p.19) discuss the prevalence of 'bolt-on' studies and the 'core competencies' that are targeted in this curricular approach. Their report as a whole provides a comprehensive study of global employability provision with an extensive focus on curricular integration and approaches. With specific reference to 'bolt-on' studies beyond curricular modules, their report entitled "*Global Graduates into Global Leaders*", identifies a trend in "universities offer[ing] 'bolt-on' employability modules as part of a degree programme, focused on developing 'core competencies' in areas such as negotiating and influencing, communication, team-working or presentation skills" (Diamond et al, 2008, p.19).

Best practice case study of bolt-on course

The case study below from University College London (UCL) is an example of 'bolt-on' curricular development. The focus of this framework is on global citize The HEA (2011, p.2) nship[6], which aligns with the wider growing need for international awareness in the job market. Diamond et al. (2008, p.6) state that "Internationalisation is a key trend in higher education and opportunities to work or study abroad are certainly an important way to build global competence". The provision of opportunities detailed in the case study below, including learning a second language, volunteering, and real world engagement, form a comprehensive framework of careers development. It is worth noting however, that this framework does also include a consideration of "degree design and content" (p.19) which demonstrates, and points to, the continued importance of employability education within courses and academic structures.

suggest that there is scope to instil global modes of working into every day teaching methodology and practice. For instance, it is possible to facilitate students to work in diverse international project teams (with other universities) or help students develop learning capacity through adopting reflective learning practice.

Framework for Education for Global Citizenship – University College London

University College London (UCL), an institution with a reputation for its wide global reach, has for some time been developing the concept of 'global citizenship'. In particular they have developed a framework for education for global citizenship which provides a framework to bring a global dimension to the entire student experience. This extends to the approach to programme delivery, degree design and content, and non-curricular events and opportunities. Through instilling a real-world global dimension in programmes across academic departments, the University hopes to support the development of a distinctive kind of graduate, ambitious by nature, with critical, creative, entrepreneurial and leadership skills that can transcend cultures and geographical borders. As part of the framework, UCL encourages a year or semester of international study with their network of around 250 exchange partners. There are also opportunities to learn a second language and for professional development, including student mentoring. The volunteering services unit coordinates a broad range of non-curricular activities allowing students to become active participants in the city and take full advantage London's vast multicultural scene.

There is also scope for universities to strengthen links with international counterparts and enable students to gain rich cultural experiences. To do this, universities must develop collaborative relationships and make programme transfer affordable for students and feasible for both institutions. Arguably, the overall experience of operating in a different country is just as valuable, if not more so, than the detail of the programme. Nottingham University, for example, has developed satellite campuses in both Malaysia and China, and actively encourages UK students to do part of their degree at either campus, as well as attracting students from China, Malaysia and the rest of the world.

Offering immersion in the world of global work

Universities can also foster global employability by providing, facilitating and encouraging work experience for students in a global business environment. Employers are incredibly enthusiastic

Figure 8. UCL Case Study: Framework for Education for Global Citizenship (Diamond et al., 2008, p.19)

Present barriers

The present barriers facing the implementation of bolt-on studies can be divided into two main areas of concern. Firstly, the way in which information about careers development is shared within and across institutions, and secondly, the relevance of careers provision in relation to industry demands.

1. Sharing information

The HEA summarises this issue clearly in their 2011 "*Review of Good Practice in Employability and Enterprise Development by Centers of Excellence in Teaching and Learning*". The HEA (2011, p.2) highlight the "need to remember…that pedagogical development will only occur if changes to teaching practices are supported by sharing effective and innovative practice across institutions". This conclusion is matched by the quantitative research project (commissioned by Higher Education Careers Services Unit (HECSU) in 2006) that set out to investigate how widespread careers education had become (Foskett & Johnston, 2006). The same diagnosis emerges in "*Values at Work*" which describes how, in the HESCU survey, "the authors of the report had considerable difficulty obtaining reliable information about exactly what each institution was providing for students" (Mitchell & Colcannon, 2009, p.3). This idea substantiates the widely held opinion in the field that "Careers services had an excellent grasp on activities in which they were involved, but substantially less knowledge of other educational opportunities for students in their institutions" (Foskett & Johnston, 2006, p.17).

2. Industry relevance

In "*Closing the Skills Gap*", a report carried out by The Economist Intelligence Unit, it was reported that, in the U.S.A "More than 60% of jobs now require some kind of post-secondary education or training" (2014, p.10). In a global world, jobs are becoming more complex and specific. As Figure 9 illustrates, many employers are looking to meet a "skills gap" by collaborating with HEIs.

However, as Diamond et al. discuss in "*Global Graduates*", there is a continual need for clear communication between industry and the institution. This problem is perhaps most clearly articulated in the comments of one anonymous employer cited in their report:

> *I think most universities are doing some sort of award or initiative that students can become involved in, but there is a bit of a mismatch between what industry is looking for and the way they are making sure students get that information."*

(2008, p.19).

Q **Is your organisation currently collaborating or partnering with higher education in efforts to make post-secondary education more responsive to workplace needs, or has it done so in the last three years? Please select all that apply. (% respondents)**

Yes, currently - **38%**

Yes, past three years - **30%**

No - **38%**

Q **What types of institutions have you partnered with? (% respondents)**

University/four-year college - **77%**

Community college - **32%**

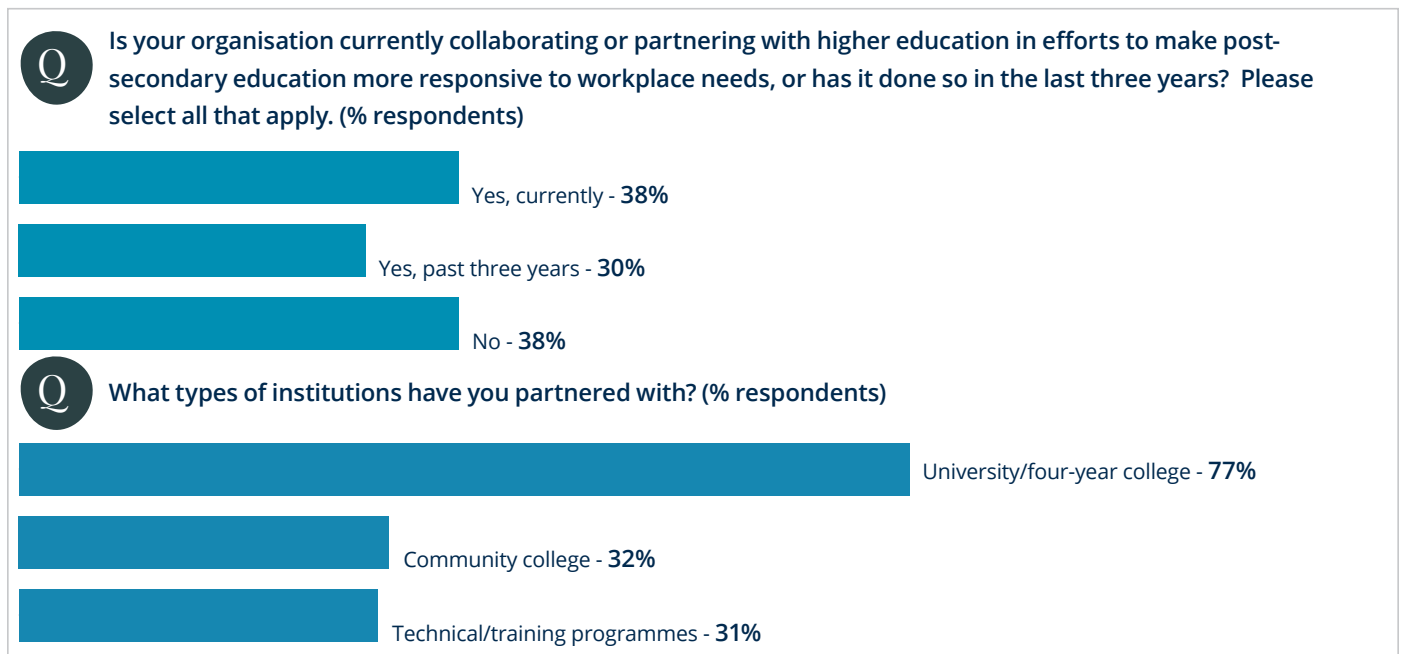Technical/training programmes - **31%**

Figure 9: Economist Intelligence Unit Survey: Industry Collaboration with HEIs (The Economist Intelligence Unit, 2014, p.10)

The Economist Intelligence Unit (2014, p.7) denotes "industry relevance" as a limitation to best practice, quoting Dane Linn (who oversees the education and workforce committee at the Business Roundtable) that "the design of the curriculum has not changed for a long time and doesn't reflect the types of jobs employees do in the workplace".

Potential improvement in the future

Audits

One solution that has been presented to address the barrier of the lack of accessible information is that of employability audits. The National UK HE STEM Programme has suggested that such audits should be student-led. For example, Dr Barrie Cooper and a team of researchers at the University of Exeter in the UK, have set up a project across STEM subjects that aims to "[provide] support to HEIs in undertaking a student-led review of the graduate skills currently embedded in their degree programmes"[7]. This approach seeks to both increase the sharing and accessibility of best practice information for practitioners and to provide crucial information for students.

Embedded studies

Whilst bolt-on studies certainly still have value and remain spaces for research and innovation, both debates and case studies of best practice around increasing 'embeddedness' are growing. This section will review the debates around 'embeddedness' which hold many practicable solutions for the future and provide existing case studies of best practice.

"*Education to employment*" (2012) commissioned by the McKinsey Center for Government in the U.S.A[8] is one such source of literature and research into the benefits of embedded provision. The report asserts that "sector-based collaborations are critical not only to create widespread industry recognition for the curriculum but also to enable delivery of training in a more cost-effective manner" (Mourshed et al., 2012, p.88). The report maps out a suggested route of best practice for embedded employability skills, stating that:

> *The best way to define a curriculum that is relevant in both achieving educational outcomes and employer requirements is for employers and providers to work together to figure out exactly what the curriculum should cover. While many providers gather input and feedback from employers, there are two keys to success: First, there needs to be intensive collaboration; second, both sides need to define their requirements at a very nitty-gritty level."*

(Mourshed et al., 2012, p.66)

Diamond et al. (2008) also conclude that a solution to a deficit in employability skills in HE graduates is to turn to the curriculum itself. The focus of their "*Global Graduates*" report is largely upon internationalisation and global job markets, and therefore it is not surprising that it argues that "there is great potential to bring in global or international aspects to any discipline, whether engineering, science, humanities or business related subjects" (2008, p. 19). Bridgstock (2008, p.28) contributes with the observation that "the extent to which the careers service is integrated, or detached, from faculty activities has a direct impact on the way in which joint work can take place with lecturers and the way in which they are able to influence the creation of employability modules within the curriculum".

Best practice case studies from embedded practices

Case study: USA

"The Automotive Manufacturing Training and Education Collective (AMTEC) offers an example of how this can work. To develop the AMTEC curriculum, high-performing technicians (not managers) from several auto companies outlined every task they performed and the competencies required for each. They then ranked these based on importance, developing a list of tasks common to the dozens of companies involved over several rounds of iterations. This was done for each specific activity, leaving no room for confusion [...] Employers and providers in AMTEC worked together to distill all this information into a curriculum composed of 60 three-to-eight-week study modules spanning 110 core competencies, with each module focusing on specific skill sets."

The Automotive Manufacturing Training and Education Collective (AMTEC) cited in "Education to Employment: Designing a System that Works" (McKinsey Center for Government: 2012, p.68)

Figure 10. AMTEC Case Study (Mourshed et al., 2012, p.68)

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[7] For more information on this project see www.hestem.ac.uk/activity/student-led-employability-skills-audit
[8] This extensive report draws upon a survey of 8,000 education providers, youth, and employers across nine countries, and a further 70, which were engaged with in detailed interviews.

Figure 11. China Vocational Training Holdings Case Study (Mourshed et al., 2012, p.79)

Present barriers

1. Academic backing

Approaches to engaging academics in the process of embedding employability skills within the curriculum are not extensively articulated within the literature reviewed. For example, whilst the Association of Graduate Recruiters (AGR) Manifesto (2015, p.9) points to the need for "genuine partnerships with employers and to make greater use of meaningful industrial boards to help shape employability programmes across all courses", it also suggests that institutions "be required to publish data which makes transparent actual levels of employer engagement alongside employment outcomes at an institutional and course level", as this is not often comprehensively articulated. Additionally, UKCES in "*The Employability Challenge*" call for fundamental changes in attitude and argue that change is required in order to "give employability parity of esteem with academic skills" (UKCES, 2009, p.3). This problem of parity is identified throughout the literature reviewed, and remains a significant barrier to best practice.

Whilst this attitudinal barrier is highlighted as a significant one across the literature reviewed, it also seeks to remind academics that their backing within the curriculum "need not be at the expense of academic quality or freedom, and should in fact enhance and enable it" (Diamond et al., 2008, p.19). Positive changes to academic backing of employability should be an advantage to the curriculum.

2. Identifying specific skills within disciplinary fields

A number of reports highlight the difficulty of embedding employability across disciplinary boundaries. Whilst some STEM subjects have direct links to industry and a natural path from education to employment, other subjects with less tangible skillsets still pose a significant challenge. For example, Mourshed et al., in "*Education to Employment*" (2012, p.67) note that:

> "One of the things we learned in our research is how highly employers value "soft skills." But they are harder to define, distil, or express. As such, we have struggled to find good examples of training programmes for soft skills that are as precise or focused as the technical modules found in the Automotive Manufacturing Training and Education Collective in the United States or the ones found in the Technical and Further Education system in Australia".

There is thus a need that emerges throughout the literature for a better identification of 'soft skills', and further research and thought into how these employability skills specifically may be embedded within the curriculum.

Potential for the future?

> " *It's worth saying that university traction usually takes a while for new ideas to get embedded into the curriculum.*"

Pro-Vice Chancellor qtd. in *Measuring the impact of Pedagogy for employability (2012) on employability policy and practice in higher education institutes* (HEA, 2013, p.7)

There is a significant amount of research and published literature on the topic of embedded employability practices. There remains, however, a need for practical resources as well as understanding and academic discussion. Owens and Tibby (2013, p.7) highlight that "the most frequently cited influence/impact achieved [is] in relation to staff awareness and understanding of employability development, rather than upon practice". This suggests that the ideas that have been developed in terms of embedded practice may therefore take a greater amount of time to have a measured impact on practice.

Pedagogy of employability skills

Discussions in literature

> **❝** *To be employed is to be at risk. To be employable is to be secure."*

Hawkins qtd. in *Why is employability important?* (University of Edinburgh, 2011, n.p.)

The relationship between academics and industry is complex. This section of the review examines the literature that has tried to connect academic thinking with employment outside of the HEI through the use of pedagogy. As Tibby (2012) argues in her "*Report on Teaching and Learning Summit*" for the HEA, "The general consensus was that models for addressing employability are often presented without the theoretical roots and underlying value positions exposed and explored. This can disengage academics from the debate". As such, literature in this area of employability increasingly attempts to engage pedagogy with practice.

Mitchell and Colcannon (2009) examined how individual practitioners have established and evolved careers education modules over time, in order to add to knowledge about careers education which circulates in policy statements. This analysis includes benchmarking (AGCAS, 2006), quality assurance exercises (QAA, 2001), and evaluation of teaching-oriented publications, such as the Higher Education Academy (HEA) "*Learning and Employability*" series.

Best practice case studies in pedagogy

Bolden et al. (2009), in "*Employer Engagement with Higher Education: Defining, Sustaining and Supporting Higher Skills Provision*", build upon a CIHE Report authored by Connor and Hirsh (2008) which explored how employer demands can influence the curriculum within HEIs. Bolden et al. drew on the 27 case studies detailed by Connor and Hirsh (2008, p.4) to assess the situation of employer engagement in curricular development. The report highlights "an increasing demand on HEIs to collaborate in multi-organisational partnerships in the design and delivery of educational provision" (Bolden et al., 2009, p.4).

The report additionally provides a model of engagement of potential relationships between HE providers and employers collaborating on the same initiative. Bolden et al. explain how in one instance, a "five-day programme developed through joint discussions between partners offered undergraduates an opportunity to learn to design and construct scaled down versions of buildings, bridges", and that "much of the active support and supervision on the programme came from the industry partners" (2009, p.24). Bolden et al. discuss how such short-term projects can expand into longer lasting relationships. For example, in the case quoted above, "the Technical Director of one of the companies took a close interest and managed the programme along with a number of civil engineering staff at the university who felt passionately about involving industry in the undergraduate curriculum" *(ibid)*. Such collaboration requires interest from industry alongside the support of academics within the HE provider in the consortium in order to secure on-going support and benefits to students.
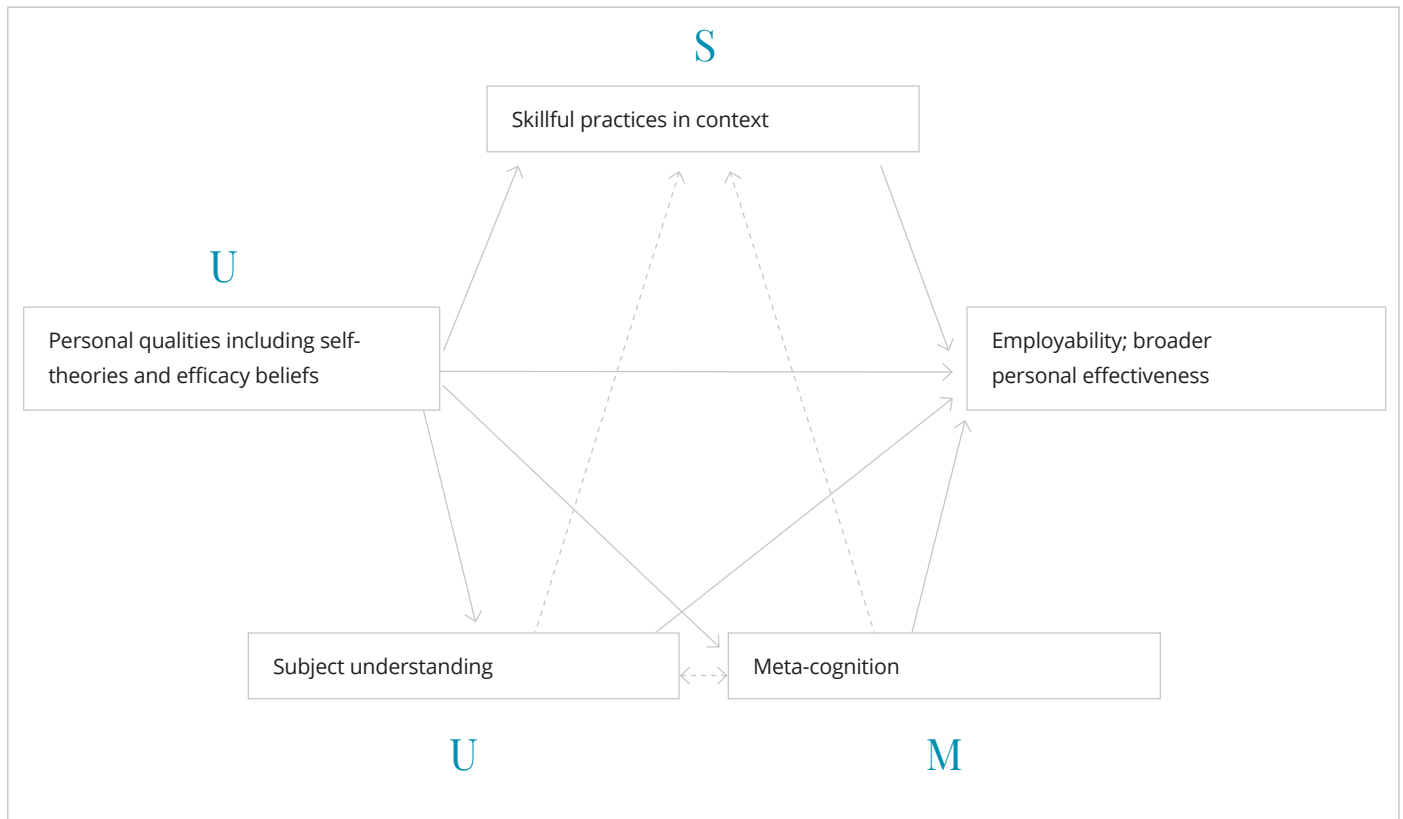
Figure 12: USEM Model of employability (Knight & Yorke, 2003, cited in Cole and Tibby, 2013, p.7)

In addition to the HE-employer consortium model created by Bolden et al., Knight and Yorke (2004) propose both an effective working definition for employability and a framework for embedding it into the curriculum. The model identifies key areas underpinning best practices in employability and is represented through the USEM model of employability (Figure 12).

Cole and Tibby corroborate the effectiveness of Knight and Yorke's pedagogical ideas. In "*Defining and Developing Your Approach to Employability*" Cole and Tibby (2013, p.7) state that:

> "The USEM model provides a framework for thinking about how to embed employability into the curriculum [and] encourages us to reflect on the way curricula includes assessment that develops the student's efficacy and meta-cognition and relate this to the development of subject knowledge and professional skills that are transferable to the practice context."

Further examples that relate to a review of best practice in employability pedagogy can be found throughout this report. For example, see page 43 for the Career Edge Model created by Dacre Pool and Sewell (2007). This literature around employability and pedagogical practice reveals that frameworks need to be multiple and various. Knight and Yorke (2004, p.2) importantly reflect

that "the complexity of employability and the variety that exists in curricula in UK higher education mean that no single, ideal, prescription for the embedding of employability can be provided", a statement that clearly has applicability beyond the UK context.

Looking to the future, Barnett (1990, p.78) presents an aspirational projection in "*The Idea of the University*" which, whilst published over 25 years ago, still remains a keystone in contemporary pedagogical thought. Barnett argues that:

> "It is imperative – if higher education is to recover anything approaching the liberal qualities that it promises – that students are encouraged to stand back, to reflect deeply, to consider the ethical dimension of both thought and action, […] and to gain their own independence from all that they learn, think and do".

Strategic and operational consideration should be given to pedagogical practices for improving and promoting best practice in employability skills development and provision across global higher education systems.

Section Three:

What graduate employability skills do employers value?

As seen in the definition for employability skills (see pages 10-12), there are many graduate attributes that are regarded as beneficial by employers. This section will evaluate the question of which skills are most valued, in specific contexts and with the use of case studies.

There are numerous studies and a variety of research relating to both generic employability skills and context-specific knowledge. The topic of STEM knowledge and commercial awareness were most notable in terms of the latter. This section will reference a wider approach to global competencies. This is an emergent area in terms of what employers seek in graduates, and therefore is worthy of recognition within this report. This section then examines strategies that countries across the world have pursued in supporting the development of employability skills that are most valued. Finally, it concludes with a selection of employability models that are designed to be tools for furthering the understanding of skills and the methods through which they can be cultivated.

Relevance and prevalence of soft skills

In "*Employer and University Engagement in the Use and Development of Graduate Level Skills*" Hogarth et al. (2007, p.10) assert "employers are concerned to recruit the set of skills associated with graduates". The processes of higher education are designed to produce skills in graduates that equip them for employment. However, as Hogarth et al. (2007, p.10) highlight it is important to remember, "graduate skills cannot be disassociated from the personal qualities and attributes of the graduate". The experience of individuals within many institutions produces a multitude of results. As the Organisation for Economic Co-operation and Development (OECD) acknowledge in a recent white paper "a range of basic and generic skills are becoming increasingly valuable as a result of changes in labour-market demands and the related uncertainty about individual career trajectories" (2011, p.29). The OECD is representative of 34 countries and therefore is a significant force in an evaluation of employer demands. Therefore, it can be broadly observed that generic or soft skills and an individuals' aptitude remain a significant part of employers' assessment of employability potential in graduates.

The literature reveals that soft skills are by far the most desired attributes in graduates around the world. These skills are defined in "*The Value of Soft Skills to the UK Economy*" to be "an individual's ability to listen well, communicate effectively, be positive, manage conflict, accept responsibility, show respect, build trust, work well with others, manage time effectively, accept criticism, work under pressure, be likeable, and demonstrate good manners" (2015, p.3). Throughout the literature reviewed, soft skills are synonymously referred to as employability skills, generic, or transferable skills.

Communication and problem solving skills

Across the countries surveyed in this literature review, the demand for both communication skills and the ability to interpret information are recognised as the general skills in most demand by the labour market. These skills are non-technical and therefore can be harder to assess and articulate. Nonetheless, numerous reports cite these skills as the table 1 indicates.

Date of Study	Country / Region	Number of employers interviewed	Preferred Skills (Top Three)	Reference for Study
2013	South Africa	80	1. Willingness to learn (84%) 2. Problem solving (83%) 3.Team working (81%).	South Africa Graduate Recruiters Association (SAGRA) *SAGRA Employer and Candidate Survey* (2013)
2008	Cambodia	220	1. Communication 2. Analytical 3. Problem solving	Cambodian Federation of Employers and Business Associations (CAMFEBA) *Youth and employment: Bridging the Gap* (2008)
2008	UK	223	1. Communication skills (86%) 2. Team-working (85%) 3. Integrity (83%)	Council for Industry and Higher Education (CIHE) *Graduate employability: What do employers think and want?* (2008)
2014	USA	161	1. Ability to make decisions and solve problems 2. Verbal communication 3. The ability to obtain and process information	National Association of Colleges and Employers (NACE) *Job Outlook 2014: Spring Update* (2014, p.8)
2010	Europe	7036	1. Teamwork 2. Sector-Specific 3. Communication	European Commission Employers *Perception of Graduate Employability* (2010, p.12)

Table 1. Preferred employability skills from around the world

STEM subjects

A CBI report "*Learning to grow: What employers need from education and skills*", highlights the most important factors in graduate recruitment and the most sought after degree subjects preferred by employers (CBI, 2012). The report reveals that the acquisition of employability skills is a more important factor than degree subject. However, 70% of employers still consider degree subject an important factor in graduate recruitment, and suggests that STEM subjects are most highly valued by the employers (see Figure 13). The CBI (2012, p.47) survey suggests that 50% of the UK employers prefer job applicants with a STEM degree, though 28% of the employers who were interviewed did not state any particular preferences for graduate recruitment. The importance of STEM subjects is also highlighted in recent literature published by the Department for Employment and Learning in Northern Ireland (DELNI). DELNI (2009) reports that there will be an increasing gap between supply and demand in STEM subjects, asserting that if this demand is not met, then economic growth will not be achieved at the desired rate or will prove to be unsustainable. The DELNI report (2009, p.32) states that many countries "are pursuing STEM strategies aggressively in an attempt to attract more young people into STEM subjects" and asserts that countries which "do this effectively will reap the benefits".
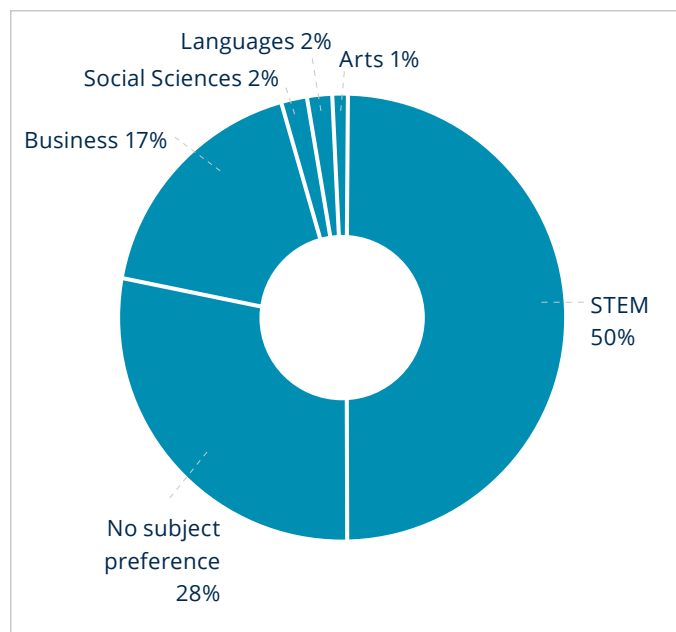

Figure 13. STEM Subjects Give Graduates Edge (CBI, 2012, p.47)

Commercial awareness

> " *I expect everyone who works for me to be commercially aware! [...] Its about being aware of the opportunities for making money and making sure that the business products and or services are delivered. It's about a shared understanding of what the business organisation is about.*"

Richard Williams, Pro Vice-Chancellor for Enterprise and Knowledge Transfer, qtd. in "An exploration of the term 'Commercial awareness': what it means to employers and students" National Council for Graduate Entrepreneurship (NCGE) 2007 p.10

Commercial awareness is a skill that is frequently cited in the literature reviewed within this report. Hogarth et al. (2007, p.35) argue that, while employers tend to be pleased with graduate skillsets, "where criticism was voiced, it was overwhelmingly directed towards a lack of commercial or practical skills that new graduate recruits were equipped with"[9]. Such criticism highlights an unfilled demand of employers. However, getting a grasp on the term "commercial awareness" can be difficult. Like soft, or generic skills, the idea of commercial awareness can be difficult to precisely define. In line with this, researchers Wilkinson and Aspinall (2007, p.5) argue that "commercial awareness is an amorphous term with no clear-cut definition in the research or practitioner-based literature".

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[9] See also Brown, P., and R. Scase, 'Universities and employers' in *The Postmodern University: Contested Visions of Higher Education in Society*, Milton Keynes, SRHE/OUP, 1997.

In a report for the National Council for Graduate Entrepreneurship, Wilkinson and Aspinall (2007) reduce this ambiguity by identifying two working definitions of commercial awareness. The first is a narrow sense, often defined by organizations as the ability to work in a business environment and apply theoretical knowledge in real-time. For example, Hogarth et al. (2007, p.35) describe how graduates might be seen as "ill-equipped to operate to time schedules, within budgets, and within the constraints of other professional demands". The second definition of commercial awareness is more general. Wilkinson and Aspinall (2007, p.4) highlight that commercial awareness may relate to entrepreneurship in a broader sense, as they state "a commercially aware graduate is one who has an enterprising or entrepreneurial approach to their work". From an educator's perspective, a useful example of embedding commercial awareness in the curriculum can be found courtesy of the University of Ulster (Morgan and O'Gorman, 2011, pp.242 – 245). Their model is shown in figure 14.

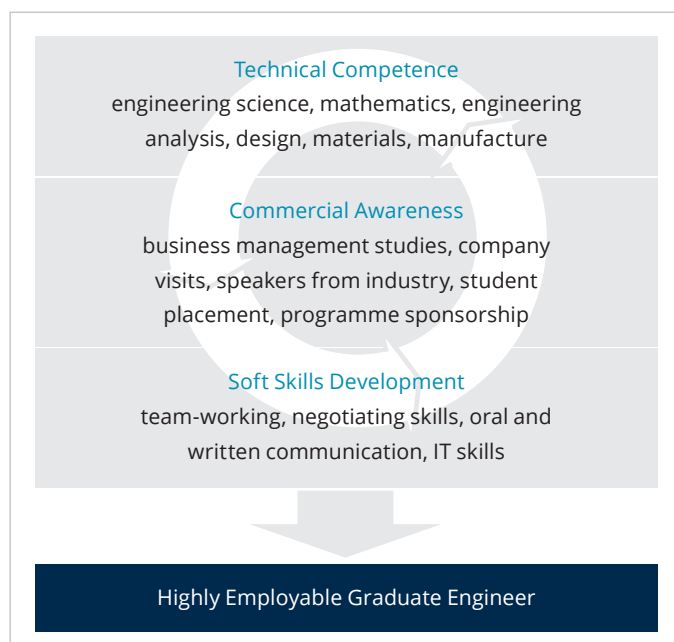| | Technical Competence |
| engineering science, mathematics, engineering analysis, design, materials, manufacture |
| Commercial Awareness |
| business management studies, company visits, speakers from industry, student placement, programme sponsorship |
| Soft Skills Development |
| team-working, negotiating skills, oral and written communication, IT skills |
| Highly Employable Graduate Engineer |

Figure 14. Developing employability skills of engineers (Morgan and O'Gorman, 2011, p. 242)

Archer and Davison (2008) identify that commercial awareness presents a large discrepancy between valuation and satisfaction. Put simply, businesses value commercial awareness, but are often not satisfied with the possession of such a skill within the graduate recruitment pool. Figure 15 outlines the gap between employer importance and employer satisfaction. The study ranks commercial awareness against other soft skills such as decision-making and communication.

	Importance rank	Satisfaction Rank	Gap
Commercial awareness	13	33	-20
Analysis and decision-making skills	10	26	-16
Communication skills	1	16	-15
Literacy (good writing skills)	8	23	-15
Passion	12	25	-13
Relevant work experience	17	30	-13
Planning and organisational skills	7	17	-10
Confidence	5	13	-8
Personal development skills	21	28	-7

Figure 15. Largest discrepancies in importance and satisfaction ratings concerning the capabilities of new graduates (Archer & Davison 2008, p.10)

Enterprise skills and entrepreneurship

As alluded to previously, the notion of commercial awareness is closely associated and intertwined with the concepts of enterprise and entrepreneurship. Indeed, the broad nature of enterprise education would encompass many of the competencies, skill sets and attributes that have already been described. Attempting to review the wider body of literature available relating to enterprise education and entrepreneurship support would not do justice to the extensive body of published work dedicated to this agenda. However, it is useful to explain how they are intrinsically linked. Helpfully, the UK Quality Assurance Agency provides useful definitions explaining these relationships in their publication 'Enterprise and entrepreneurship education: Guidance for UK higher education providers' (QAA, 2012).

In short, enterprise education provides individuals with the skills, tools and insights to enable them to create ideas and make them happen. Examples of enterprise skills that might facilitate this outcome are described by the QAA (2012, p.8) as:

"...taking the initiative, intuitive decision making, making things happen, networking, identifying opportunities, creative problem solving, innovating, strategic thinking, and personal effectiveness [and]... extends beyond knowledge acquisition to a wide range of emotional, intellectual, social, and practical skills."

In contrast, entrepreneurship is the process of applying enterprise skills to create and grow organisations in order to identify and build on opportunities.

Whilst elements relating to the delivery of enterprise education are implicit within the support provided by conventional careers and employability services, provision within these functional areas to support and advise on self-employment and business start-up is by no means consistent or even readily available across the sector. This may be due to a lack of expertise within these departments or, more likely, that these areas of responsibility may reside with university directorates associated with 3rd mission (or business support) objectives.

Extra-curricular activities

The literature suggests that extra-curricular activities also provide evidence of graduates' suitability to employers. Yorke and Knight, among others, have highlighted that "there is a need to recognise that the co- and extra-curricular achievements of students contribute to a graduate's employability" (2006 p.2). Whilst these activities are not a specific set of skills contained within the curriculum, or even necessarily part of the academic practices of a university, extra-curricular activities are nonetheless part of the processes of higher education. Cole et al. (2007) suggest "recruiters attribute leadership, interpersonal skill, and motivational qualities to applicants with numerous extracurricular activities" (2007, p.323).

Purcell et al. have explored the impact of extra-curricular activities on graduate recruitment in the UK. Their study reveals that "graduates who took part in extra-curricular activities [...] were less likely to be unemployed, and more likely to be employed in a graduate job" (2013, p.xxiii). Purcell et al. continue, and assert that:

> "this demonstrates the value employers place on such activities as a means of demonstrating desirable characteristics, such as teamwork and leadership [...] as increasing proportions of graduates leave HE with a 1st or 2:1, 'added value' in the form of extra-curricular experience, along with work experience, outside academic studies has become an increasingly important way graduates may set themselves apart" (2013, p.xxiii).

In the United Kingdom, there is a growing recognition of the importance of extra-curricular activities; for example, the Quality Assurance Agency (QAA) has actively encouraged the establishment of award schemes for such activities (2013, cited in Ward, 2012).

A global perspective on employability

Global competencies

Employability skills are increasingly seen as relating to global perspectives and attributes. For example, Diamond et al. argue that "educational institutions need to provide the right environments and opportunities for young people to [...] develop not only sound employability skills but global competencies and a globally attuned mindset" (2008, p.21). Similarly, Playfoot and Hall emphasise that across the world "the nature of skills demand is increasingly consistent, with businesses and organisations in different countries looking for people with a core set of transferable qualities" (2009, p.12).

The literature reviewed sees the present time as the era of globalisation, which has meaningfully changed the ways in which employers will be recruiting graduates, and the skills that they desire in employees. Processes of globalisation have led to what Abbas et al. have described as a demand for "graduate[s] who are not only highly skilled and well qualified, but are able to adapt [and be] flexible [and] apply and transfer their knowledge and skills to different contexts" (2013, p.40). Abbas et al. write from a Malaysian perspective, and argue strongly that:

> "As Malaysia works to position itself in this network of global interactions and changes, higher education will have to adapt to the rapidly changing environment [...] to produce the skills and technological innovations necessary for successful economic and social participation in the global world" (2013, p.35).

Transnational experience

" *A student with international experience will be better prepared to work in teams with people from different backgrounds and with different views. They are also more likely to be more open-minded, flexible and able to adapt to any situation. International exposure opens the mind to different ways of thinking and challenges students to consider innovative approaches and solutions."*

Kerrie-Ann Stein-Goujon, Head of Employment and Recruitment, Airbus Group qtd. in "What are employers really looking for when hiring graduates?" (European Association for International Education, 2012, p.25)

The body and scale of research literature expounding the value of an international experience, whether study or work related, has grown significantly in recent years. The levels of evidence demonstrating improved career prospects have also increased (European Union, 2014).

As higher education has become more internationalised and the effects of globalisation continue to affect an increasing number of businesses around the world, the value placed on the attributes gained through such experiences continues to grow. The number of students studying in higher education outside of their home country doubled during the period 2000-11 and reaching 4.3 million in 2013 (OECD, 2013, p.32). This is expected to rise to 7.2 million by 2025 (Hazelkorn et al., 2014, p14). As a result, employers are increasingly recognising and being exposed to the value of these experiences as the numbers of graduates returning to the labour market continue to grow.

The 2011 Global Employer Survey, drawing on responses from over 10,000 employers from 116 countries from around the world, revealed that 60% of respondents "value international study when recruiting talent" (QS Intelligence Unit, 2011, p.6). Spain (89%) had the highest number of employers agreeing they "actively seek or attribute value to an international study experience when recruiting" with China and Thailand (70%) having the highest score amongst Asian countries, whilst South Africa (26%) and New Zealand (24%) scored the lowest (QS Intelligence Unit, 2011, p.9).

Not surprisingly, with students demanding higher rates of return from their investment in higher education, the increased value placed on international experience by employers has not gone unnoticed by the increasing number of students who venture abroad to study. In a recent survey of 500 students from France, Italy, Russia and the UK, 'employment prospects' was cited as the most common benefit associated with attending an internationally recognised university by students (Karzunina & Bridgestock, 2015). 62% of the students rated this as the highest incentive, followed by 'connections worldwide' (45%), 'quality of education' (34%), 'student experience' (28%) and 'opportunities to travel' (27%) (p.3).

According to the results of the recent Erasmus Impact Study (European Union, 2014), the assumptions held by students in the survey above are well-founded with many students benefiting their career prospects compared to those who didn't engage in an international experience. Supporting the results from the employer survey, 64% of the employers surveyed in the Erasmus Impact Study consider an international experience as important for recruitment (p15). The views amongst the graduates who had worked or studied abroad during their time at university are equally compelling with 1 in 3 students being hired or offered a permanent job by their host company whilst on placement. Longer term benefits are also apparent in the report with unemployment rates amongst Erasmus students five years after graduation reported as 23% lower than those not having secured a transnational experience.

So why might a transnational experience add to the career development and employment prospects of an individual above and beyond engaging in the same activities in their native country? In a review of associated literature the Erasmus Impact Study cited several studies that demonstrate that experience abroad goes beyond the development of professional and academic attributes and knowledge but is also able to "...promote openness, adaptability and flexibility, or enhance language learning, intercultural skills, self-reliance and self-awareness (p.62)".

Indeed, the surveys undertaken with Erasmus students demonstrate that the skills improved the most from the perspective of the student were those associated with specifically being abroad. These included for example, knowledge of the host country's culture and society, ability to work with people from other cultures, learn and develop foreign language skills and other intercultural competencies. All of which were rated higher, in terms of levels to which they were acquired, than those more generic employability skills such as reading and writing, decision-making skills, analytical and problems-solving skills.

Whilst acknowledging the opportunities for students to gain these aspects of 'global competencies' during an international experience, Ouyang and McAlpine (2013) argue that the benefits go far deeper for an individual enabling them to develop as a 'global citizen'. The authors further describe the development of 'global citizenship' as the empowerment of individuals "by a broader knowledge of the wider world that contributes to their intellectual abilities of problem-solving and critical thinking, and most importantly a strong sense of social responsibility from an unbiased global perspective" (p.10).

Global skills race

Playfoot and Hall (2009, p.9) argue that "the 'global skills race' is real and is intensifying", and describe how "levels of skills and education are vital components in the skills race and will increasingly determine the economic fortunes of many countries". Some specific examples from a variety of countries will be further expanded upon below in the following review of "national skills strategies".

National skills strategies

Across the world countries have elected to focus on the development of specific skills that reflect the economic and social needs of a society. The demand for specific skills can raise the valuation of employability skills in particular contexts. As a result, government and policy-makers have taken a direct role in employability in some

countries. Wright and Sissons (2012, p.6) highlight that "initiatives to improve skills utilisation [that] have been undertaken in Australia, New Zealand, Scandinavia, and also Scotland" Appendix 2. In Scotland, the skills programme seeks to "improve the skills and employability of individuals and creating high skill, high productivity, healthy workplaces where this talent can be best used" ("Skills for Scotland" n.p.). The specific attention to "high skills" reveals the need for a complex job roles and specific proficiencies in Scotland.

Similarly, Zaharim et al. (2009) have compared the importance of engineering skills in Malaysia, Japan, Singapore and Hong Kong (Figure 16). Zaharim et al. use a variety of locations that reveal different preferences in terms of the skills that are most valued. For example, in Malaysia and Japan effective communication is perceived to be the most valued skill whilst in Singapore numeracy and literacy are in highest demand (Zaharim et al., 2009, p.312).

No.	Malaysia	Japan	Singapore	Hong Kong
1	Communication effectively	Communication skills;	Workplace literacy & numeracy	Work Attitude
2	Competent in application and practice	Problem-solving skills	Information & communications technology	Interpersonal skills
3	Interpersonal or team working skills	Goal-setting skills;	Problem solving & decision making	Analytical & problem-solving skills
4	Engineering problem solving and decision making skills	Personal presentation skills;	Initiative & enterprise	English language proficiency
5	Apply knowledge of science and engineering principles	Visioning skills;	Communication & relationship management	Numerical competency
6	Competent in specific engineering discipline	IT and computer skills	Lifelong learning	Information technology literacy

Figure 16. Engineering employability skills required by employers (Zaharim et al., 2009. p.312)

Present barriers to understanding and fulfilling employers' demands

Defining "Employers" – SMEs or Multinationals?

One of the problems in understanding the skills that employers want within the literature reviewed is the distinction between global companies and SMEs. In general, surveys rarely differentiate between the different kinds of employability skills that might be demanded by international organisations compared to SMEs. As Archer and Davidson (2008, p.6) argue "the needs of an international company will differ to one that does not trade internationally". This issue is further explored in the final section of this report in "Future Directions" where the growth of SMEs is examined in more detail.

Archer and Davison have sought to address this deficit in skill demands through descriptions of various sizes of business. In their study of 233 UK firms, Archer and Davison (2008, p.7) demonstrate that regardless of company size, 'communication skills, team-working and integrity' are the most valued soft skills by UK employers (80%) while decision-making and analytical skills are deemed more important by large companies in comparison to those with fewer than 1000 employees. Archer and Davidson reveal that character and personality become less important as the size of organisation increases, while the ability to make decisions is considerably higher than in the case of smaller businesses (Figure 17).

Skills/Size	1-99	100-999	1000+	Grand Total
Communication skills	88%	86%	82%	86%
Team-working skills	85%	84%	84%	85%
Integrity	81%	86%	82%	83%
Intellectual ability	81%	84%	78%	81%
Confidence	80%	81%	78%	80%
Character/personality	81%	79%	60%	75%
Planning & organisational skills	74%	72%	75%	74%
Literacy	68%	72%	75%	71%
Numeracy	68%	67%	69%	68%
Analysis & decision-making skills	64%	67%	73%	67%

Figure 17. Top 10 skills and capabilities when recruiting new graduates (Archer & Davison, 2008. p.7)

Models and frameworks of employability

In addition to a discussion of specific examples of skillsets and employment preferences, this section concludes with several models of employability. In literature concerning HE career service provision, delivery methods are commonly cited to assist in capturing the abstract, or generic, skills that employers demand. There are a number of different theoretical models that articulate employability skills in different ways. This section focuses upon the UKCES' employability model, the CareerEDGE model, and National Career Development frameworks.

UKCES employability model

The UKCES employability model concentrates on the idea that the graduate employee should begin with a positive approach to employment (Figure 18). According the UKCES (2009, p.10) this means "being ready to participate, make suggestions, accept new ideas and constructive criticism, and take responsibility for outcomes".

Here, the importance of individual development is stressed. Communication, technological and numerical skills are the three most important factors according to this model. These skills are seen to be the keystones in fulfilling more non-specific skills such as "thinking and solving problems" and "self-management" (UKCES, 2009, p.11).

welcome to everyone, then somebody has misunderstood it. We do not think that what is happening at the moment is good enough. We want to see change. Although that change has to be empowered and encouraged (and not impeded) by policy, funding and assessment, it has to *happen* at the level of individual schools, colleges, universities and employment training providers.

For the purposes of this document we take employability skills to be those set out in the diagram below:
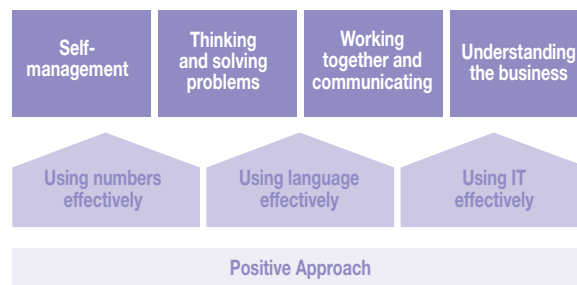
We expand on this definition in Chapter 1, which also sets out why employability skills are so important to the UK. In keeping with our focus on what needs to happen in the learning environment, however, we do not wish to be over-prescriptive about definitions. There are many good ones: they all overlap. Regardless of how employability skills are defined, the challenges in helping people develop these skills are the same.

Figure 18. "What are Employability Skills?" *The Employability Challenge* (UKCES, 2009, p.5)
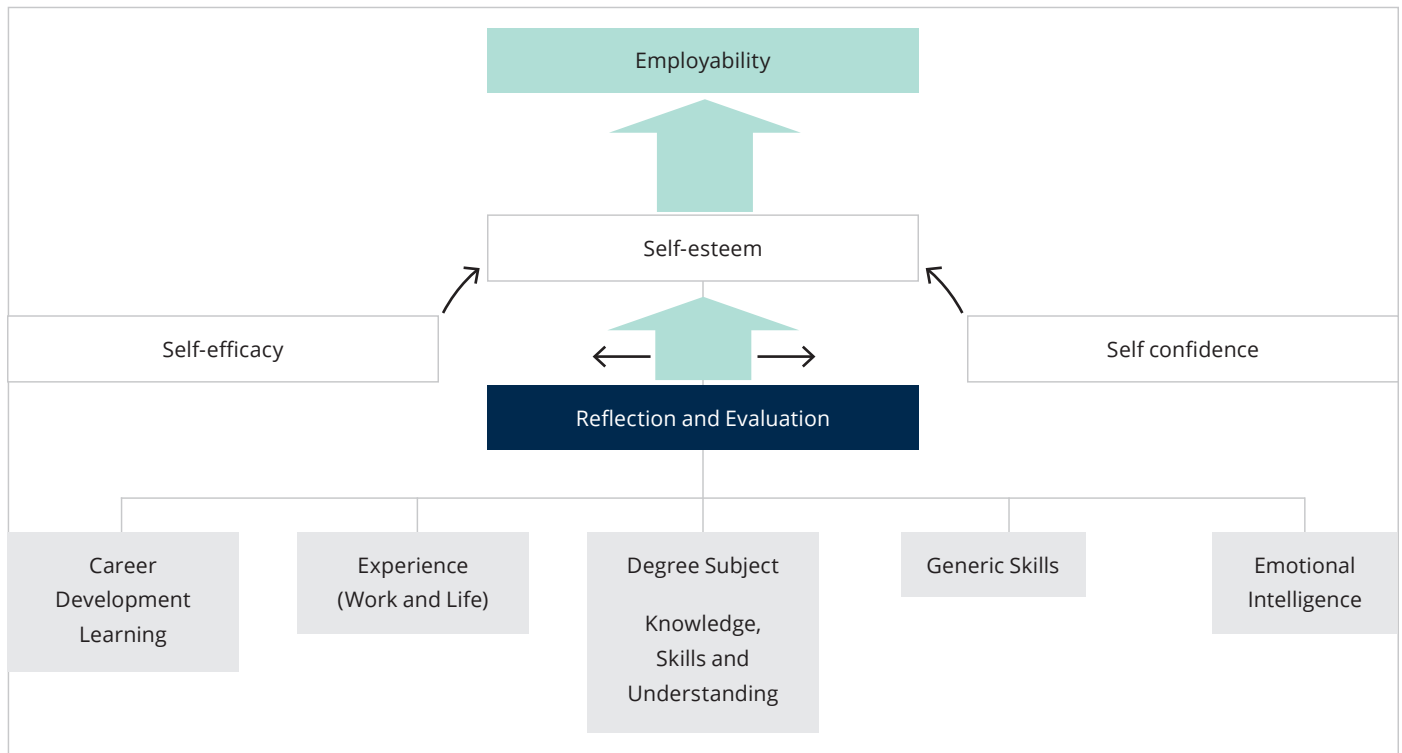
CareerEDGE model

Figure 19. CareerEDGE model (diagram adapted from Pool & Sewell, 2007 p.280)

The CareerEDGE model (Figure 19) was developed by Dacre, Pool and Sewell (2007, p.280) and describes a more complicated model for the acquisition of employability skills. As highlighted in Section One (see page 17), career practitioners Tibby and Cole advocate the use of the CareerEDGE model as a tool for explaining the intangible concept of employability to a range of stakeholders.

National career development frameworks

In contrast to the HE-centric career and employability models already mentioned, more holistic models exist around the world in the form of national career development frameworks. Whilst the review was unable to surface the extent to which the following cited models are adopted in individual universities, higher education is mentioned as a component of lifelong learning and career planning in both examples and therefore warrants inclusion in this review.

Canadian blueprint for life

One such example is the Canadian Blueprint for Life model which was devised through a collaboration of a number of career practitioner agencies with Canada and the USA (National Life/Work Centre, 2001). Its overarching purpose is to provide a common language across Canada for the outcomes of career development initiatives and activities at any stage of an individual's career development. More specifically, the Canadian Blueprint for Life is designed to describe "The *competencies* Canadians require, from childhood to adulthood, to effectively manage their life/work development;" and "A *comprehensive process* for developing and redesigning programs, products and services that will help Canadians acquire the above competencies" (National Life/Work Centre, 2001, p.1).

Australian blueprint for career development

Adapted from the Canadian Blueprint for Life model, the Australian Government's Department of Education and Training is the national sponsor promoting the "*Australian Blueprint for Career Development*" (MCEECDYA, 2010). Not surprisingly due to the primary influence from the Canadian equivalent, it shares a similar purpose:

> "[t]he primary aim of the *Blueprint* is to enable teachers, parents, career development practitioners, employment service providers, employers or others who are in a position to support people's careers and transitions, to work with a nationally consistent set of career management competencies which will help all Australians to better manage their lives, learning and work" (MCEECDYA, 2010, p.9).

Other models

The USEM Model (Yorke & Knight, 2006) is included in Section Two of this review (see page 31) and therefore will not be repeated in this section. The model is of use to practitioners within the field particularly in understanding the ways in which desirable skills are embedded into the curriculum in higher education.

Conclusion

This section has evaluated the desirable skills that employers seek in graduates across the world. As the employability models above have outlined, soft skills are consistently the most highly valued skillsets in employment. Communication skills, the ability to problem solve, and attitude to work are seen to be valued by employers across the globe. That said, this review has also highlighted that in a technological world, STEM subjects and technical skills continue to be in short supply. Beyond curricular and academic skill acquisition, extra-curricular activities are seen to be an important experience to help graduates acquire these skillsets and stand out from the crowd.

Given the wide range of employability skills, knowledge and attributes outlined in this section, it is reasonable to ask which of these skills a student should concentrate on acquiring and developing. From the context of most career practitioners, the answer is simple: "it depends". Ultimately it depends on the competencies and knowledge required for successful entry into a given sector, occupation and the specific requirements of the employer. Many career practitioners will have a variety of tools to support this decision-making process, including a variety of underpinning theoretical models which support the rationale for the context in which they are used. This section has already provided models where this reflective process is implicit, if not explicit. Dowson (2015, p.45) describes the process of 'skills acquisition' as a three staged approach consisting of:

- Skills analysis – what skills are needed for the world of work generally? Which do I already possess and where are the gaps?

- Skills match/ identification – what skills do I need for my target career?

- Skills training – how do I secure the opportunity, training or experience that will equip me with the required skills and knowledge?

In an era of globalisation, the need and expanding breadth of skills that are labelled as 'global competencies' is an emergent area for future career and employability provision. There is a need for HEIs, in collaboration with employers, large and small, to assist students in making sense of these skillsets and taxonomies so students are able to apply this understanding in the context of their own career planning, acquire relevant skills for a given opportunity and successfully articulate their value for the career opportunities of their choosing. This is discussed further in the "Future Directions" section of this report.

Section Four:

How can HEIs and employers build closer working relationships?

> " *Universities think they're adequately preparing students for the workforce. You couldn't have a more stark difference of opinion from industry. They're not getting anywhere close to what they need."*

Dane Linn, the Vice President for the Business Roundtable qtd. in *Closing the skills gap: Companies and colleges collaborating for change* (The Economist Intelligence Unit, 2014, p.7)

The previous section assessed literature exploring which employability skills employers most valued in graduates. This section moves on to consider the ways in which HEIs can build collaborative partnerships with employers. It first makes the case for HEI-employer collaboration, referencing both the global 'skills shortage' and inconsistencies in HEI and employer understandings of graduate 'work-readiness' (Mason et al., 2006, p.2). It then goes on to outline the benefits of HEI-employer collaboration, for both HEI and employer partners. It proceeds to list the types and varieties of HEI-employer collaboration, before presenting a number of global case study examples. Finally, this section will provide an overview of the challenges and obstacles facing partners in HEI-employer collaborations.

The case for HEI-employer collaboration

As has been illustrated in section 3 (pp.34 - 46), there is an increasing demand for graduates with "higher level skills", a demand that is not always being matched by supply (UKCES, 2014, p.8). This condition has been described within the literature as a global 'skills shortage' (see CBI, 2012; City and Guilds Centre for Skills Development, 2008; DELNI, 2009; Manpower, 2015; Mourshed et al., 2012; UKCES, 2014).[10] This 'skills shortage' has been highlighted as a contemporary employability issue in Manpower's recent (2015) "*Talent Shortage Survey*".[11] In their extensive global survey, Manpower (2015, p.3) calculated and ranked global graduate 'talent shortage' (Figure 20), noting that, "the number of global employers reporting talent shortages in 2015 peaks at a seven-year high of 38%".

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[10] For further information about the context and history of the global skills shortage, see The Economist Intelligence Unit (2014, pp.4-6).

[11] The Manpower (2015, p.3) report "surveyed more than 41,700 hiring managers in 42 countries to identify the proportion of employers having difficulty filling positions, which jobs are difficult to fill, and why. Employers were also asked about the impact talent shortages have on their organizations and what steps they are taking to address them."
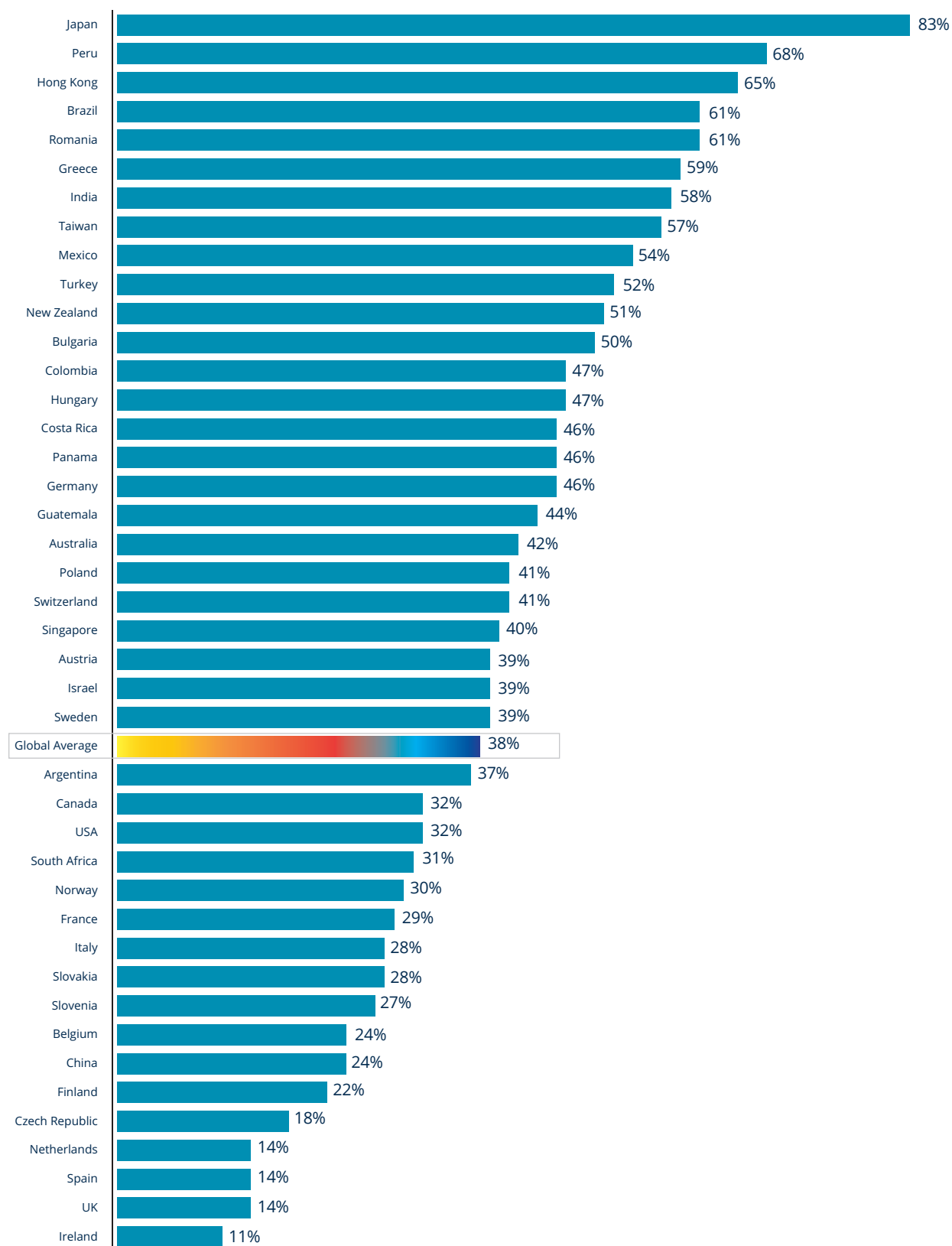
Country	Percentage
Japan	83%
Peru	68%
Hong Kong	65%
Brazil	61%
Romania	61%
Greece	59%
India	58%
Taiwan	57%
Mexico	54%
Turkey	52%
New Zealand	51%
Bulgaria	50%
Colombia	47%
Hungary	47%
Costa Rica	46%
Panama	46%
Germany	46%
Guatemala	44%
Australia	42%
Poland	41%
Switzerland	41%
Singapore	40%
Austria	39%
Israel	39%
Sweden	39%
Global Average	38%
Argentina	37%
Canada	32%
USA	32%
South Africa	31%
Norway	30%
France	29%
Italy	28%
Slovakia	28%
Slovenia	27%
Belgium	24%
China	24%
Finland	22%
Czech Republic	18%
Netherlands	14%
Spain	14%
UK	14%
Ireland	11%

Figure 20. Percentage 'talent shortage' or difficulty in filling jobs by country, measured in 2014 (Manpower, 2015, p.7)

Those reporting the largest "talent shortage" and thus "struggling to fill jobs" include "83% and 68% of employers in Japan and Peru respectively", and those reporting the smallest talent shortage include the Netherlands, Spain, and the UK (14%), and Ireland (11%) (Manpower, 2015, pp.3, 7). The Manpower (2015, p.5) report also details the "top 5 reasons for difficulty filling jobs", of which a "lack of experience" (22%) is listed as the third reason of five. Similarly, in an extensive survey, The McKinsey Centre for Government equally found that only 43% of employers were able to find skilled entry-level workers. The report suggests that "this problem is not likely to be a temporary blip; in fact, it will probably get much worse," estimating that "by 2020 there will be a global shortfall of 85 million high- and middle-skilled workers" (Mourshed et al., 2012, p.11). In raising questions about experience provision, such reports have then turned to consider HEI-employer collaborations as a potential mechanism through which to redress these global talent imbalances.

HEI-employer collaboration may also aid in addressing what the literature has identified as differences and inconsistencies in the perspectives of each partner in terms of their expectations of graduate 'work-readiness'. This issue has been highlighted as a global one in Mourshed et al.'s (2012) report entitled *"Education to employment: Designing a system that works"*. Here, Mourshed et al. (2012, p.40) highlight the global variations in the perception of graduate work-readiness from the perspectives of both employers and HEIs. In so doing, they also calculate the percentage differences in the perceptions of held by each collaboration partner (Figure 21).

Mourshed et al. (2012, p.40) found that the largest inconsistencies between the perceptions of HEIs and employers around graduate work-readiness are present in Germany, the United States, Mexico, and Brazil.

Agreement that graduates/new hires are adequately prepared
% of respondents

	Provider perspective	Employer perspective	Difference
United States	87%	49%	-38%
India	83%	51%	-32%
Germany	83%	43%	-40%
Mexico	77%	40%	-37%
Saudi Arabia	70%	55%	-15%
Turkey	70%	50%	-20%
Brazil	67%	31%	-36%
United Kingdom	61%	36%	-25%
Morocco	53%	20%	-33%

Figure 21. (HEI) Provider and employer perceptions of graduate readiness for the job market, by country (Mourshed et al., 2012, p.40)[1]

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[12] Those 'providers' surveyed were asked whether they agreed with the statement, "Overall, graduates from my institution are adequately prepared for entry-level positions in their chosen field of study". Those employers surveyed were asked whether they agreed with the statement "Overall, employees we hired in the past year have been adequately prepared by their pre-hire education and/or training" (Mourshed at al., 2012, p.40).

In acknowledging the existence of both the global 'skills shortage' and inconsistencies in HEI and employer understandings of graduate work-readiness, numerous commentators have recommended HEI-employer collaboration as an approach to redress the balance and to produce work-ready and skilled graduates. HEI-employer collaboration is therefore presented as a "valuable tool for building relevant higher level skills" (UKCES, 2014, p.9; see also Docherty, 2014). This sentiment is reflected in a recent study by the Economist Intelligence Unit (2014, p.1), in which 343 US business executives "familiar with their company's workforce-development strategy and higher-education efforts" were surveyed.[12] In so doing, they found that 63% of those surveyed considered investments and relationships in "post-secondary educational institutions or programmes" yielded a "long term return to the company" in the form of "broadening the pool of skilled talent" (p.19).

The literature concerned with HEI-employer collaborations also proposes that such partnerships are beneficial for a number of additional reasons. These benefits are often outlined and framed separately for both the HEI and employer partners. A range of collaboration benefits for each partner are presented in Table 2.

Source	Collaboration benefits for employers
UKCES (2014, p.11)	Providing "pathways into industry"
	Drawing in "new talent into an industry or region"
UKCES (2014, p.7)	Improving "competitiveness and productivity"
	Improving the "retention of existing staff "
Lambert Review cited in Hogarth et al. (2007, p.11)	Providing a "supply of skilled graduates and post-graduates for recruitment"
	Providing access to "the latest research and cutting-edge technology"
The Economist Intelligence Unit (2014, p.18)	To address the "need for workers with strong 'foundational skills'"
	To address the "need for workers with strong 'soft skills'"
The Economist Intelligence Unit (2014, p.19)	To "lower employee turnover "
	Benefiting the "brand" by "being seen as socially responsible and invested in the community"
	Providing "access to research infrastructure at a low cost"
	"Tax incentives"
Flynn (2014, p.4)	The "chance to bring in new ideas, [and] different ways of looking at things"
	Collaboration benefits for HEIs
UKCES (2014, p.11)	"Increasing student employability through work-based practice"
	"Differentiating their offer from other universities"
	"Creating a more relevant curriculum for employers"
	"Raising their profile and increasing income diversity"
UKCES (2014, p.7)	"Universities can extend and strengthen their curriculum"
	"Access to real world problems and an opportunity to market ideas"
	"An enhanced role in regional and national economic development"
	"Access to new facilities and equipment"
	Collaboration benefits for students
Flynn (2014, p.4)	Students are provided with the "opportunity to develop knowledge, skills, contacts, industry insights and their marketability to future employers"
	"Research from the [UK-based] High Fliers Graduate Market Report 2014 suggests that graduate recruiters estimate 37% of the graduate vacancies available from employers participating in the research will be filled by applicants who have already worked for the organisation as a placement student"

Table 2. HEI-employer benefits for HEIs, employers, and students

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[13] In this study, "nearly half (47%) of respondents are C-level executives or equivalent, and 53% are senior vice-presidents, vice-presidents or other senior managers. More than half represent very large companies, with 54% of respondents hailing from companies with annual revenue of more than US$1bn. Nearly one-third (34%) come from companies that have more than 10,000 employees" (The Economist Intelligence Unit, 2014, p.1).

This section has sought to make the case for HEI-employer collaboration. The following provides examples of the different types and forms of HEI-employer partnership found within the literature.

Types of HEI-employer collaboration

> " *The response from universities to date has been to go all out for more: more placements, more internships, more years in industry, more employability. It's an employability gold rush and the results are all around us*"

Redmond, *A response to David Docherty's paper* (Docherty, 2014, p.8)

There are numerous forms of HEI-employer collaboration. A selection of recurrent forms of collaboration which have emerged from the literature are listed in Table 3.

Source	Type of HEI-employer collaboration
CBI (2013, p.61)	Work placements
	Sandwich years
	Internships
	Projects
	Careers fairs or events
	Sponsorship
	Work-based learning
	Involvement in degree advisory boards
Hogarth et al. (2007 p.8)	Graduate recruitment
	Funding
	Involvement in assessment
Hogarth et al. (2007, p.9)	Involvement in teaching or curricular activities
Lambert Review (2003, cited in Hogarth et al., 2007, p.9)	Research and development
	Knowledge and technology transfer
Mitchell (2011, p.5)	Mentoring
	'Dragon's Den' panels
Bottomley and Williams (2006, cited in Mitchell, 2011, p.5)	Secondment of academic to an employer

Table 3. Types of HEI-employer collaboration

The popularity of each of these forms of HEI-employer collaboration varies on both a global and institutional level. For example, in their report entitled "*Changing the pace: CBI/ Pearson education and skills survey 2013*", CBI surveyed "294 [UK] employers, collectively employing some 1.24 million people" (2013, p.6). From this the survey then ranked the forms of HEI-employer links by percentage (Figure 22).
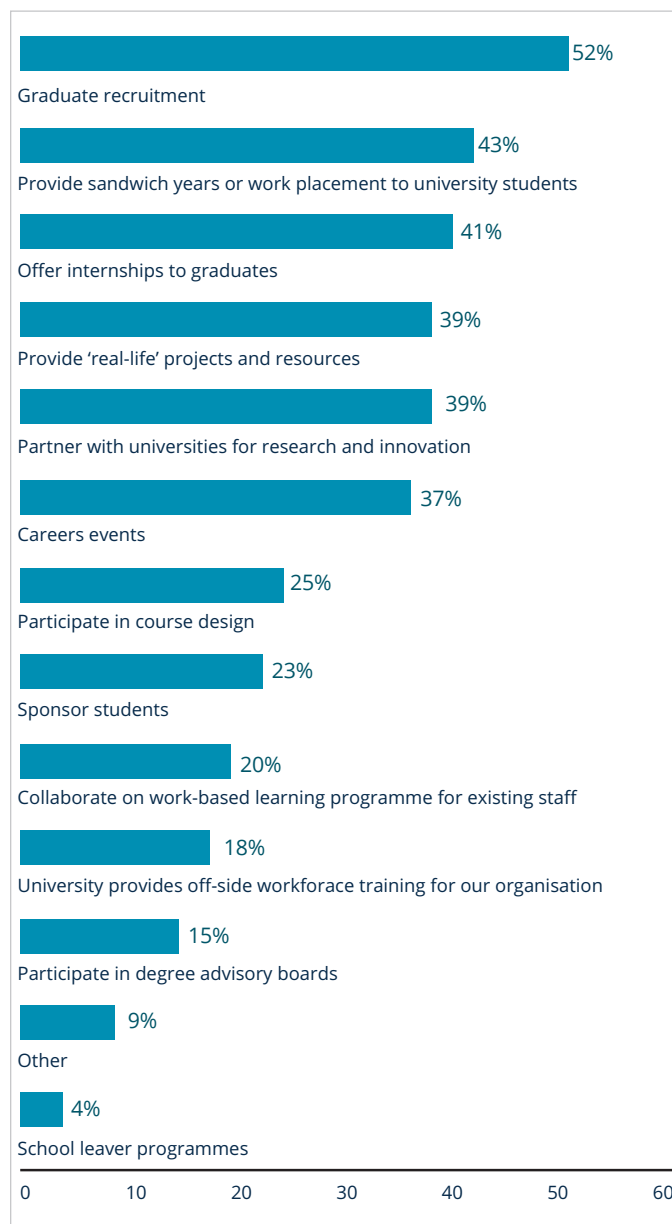
Figure 22. Nature of employer links with universities, by percentage (CBI, 2013, p.61)

For those surveyed, the most common form of HEI-employer links include 'graduate recruitment' (52%), followed by 'sandwich year or work placements' (43%), and 'internships' (41%). Such distinct forms of HEI-employer collaboration differ in terms of their length (i.e. short-term or long-term), formality ("from formal equity partnerships, contracts, research projects" to "publications and interactions in conferences"), focus (i.e. on "training or research"), and intensity (Guimón, 2013, pp.1-2). In addition, both the types and priorities of HEI-employer collaboration may also vary depending upon whether the HEI is a teaching or research focused institution, and depending upon the host country's level of economic development. These contexts are illustrated in Figure 23.

Given the variety of HEI-employer collaboration types and forms, this review will not detail examples of each. Rather, it will first reference a useful guidance tool, suitable for facilitating and aiding the implementation of a range of HEI-employer types of collaboration and provide several best practice case studies. An additional table of further resources and case studies is also included for reference (See Appendix 1 in "Researchers' Toolkit").

In their recent report, the UKCES (2014, p.16) state "collaborations between universities and employers are diverse in nature, but successful examples share certain common features". Drawing upon twelve (UK-based) case studies, the report presents a series of "general principles on how effective collaboration can be established and maintained" (ibid). The report presents four key stages, namely: "identifying employer needs and scoping solutions", "design and setup", "delivering outputs", and "building for success" (2014, pp.16-17). Extensive descriptions and tools are provided to equip both HEIs and employers in implementing each stage. The basic details associated with each stage are also neatly demonstrated (see Figures 24 and 25).

	Most developed countries	Least developed countries
Teaching University	Private participation in graduate programmes Joint supervision of PhD students	Curricula development to improve undergraduate and graduate studies Student internships
Research University	Research consortia and long term research partnerships to conduct frontier research	Building absorptive capacity to adopt and diffuse already existing technologies to respond to local needs
Entrepreneurial University	Spin-off companies, patent licensing Entrepreneurship education	Business incubation services Entrepreneurship education

Figure 23. Priorities for university-industry partnerships at different stages of economic development and with different institutional focus (Guimón, 2013, p.3) (style adapted)

Stage 1: Identifying employer needs and scoping solutions	Stage 2: Design and setup	Stage 3: Delivering outputs
‣ Scope and identify demand ‣ Account for complexity that spans different industries and regions ‣ Provide clarity around offer and any expected outcome ‣ Is a collaborative approach needed?	‣ Align strategic focus ‣ Choose appropriate models of engagement, and models and methods of delivery ‣ Resourcing and clear shared agenda ‣ Consider how collaborations will be funded ‣ Acknowledge the strengths and limitations of collaborating partners	‣ Ensure products are fit for purpose or universities and relevant for employers ‣ Articulate the benefit of collaboration to participants ‣ Develop the virtuous circle of learning, application, feedback and refinement.

Figure 24. Stages of effective HEI-employer collaboration (UKCES, 2014, p.16)

Stage 4: Building for success

What does success look like for employers?

▸ Access to new talent and people with the right skills

▸ Improved economic performance

▸ Talent pipeline is established meeting a clear business need

▸ Changing recruitment practices

▸ The best staff are retained

What does success look like for universities?

▸ Programmes which deliver relevant skills and qualifications

▸ Programmes which are adaptable to changing economic contexts

▸ Wider organisational goals are met

▸ Greater networking opportunities

What does success look like for individuals?

▸ Opportunities for people to progress into industry, specific businesses or specific roles

▸ Access to high quality and credible alternative pathways into employment

Figure 25. Stage four of effective HEI-employer collaboration (UKCES, 2014, p.17)

As demonstrated in the above figures, each of the four stages raises a particular set of questions and tasks for both employers and HEIs wishing to implement collaborative ventures. As is evident, this framework is one reflecting the ethos of a holistic or ecosystem approach to employability provision, as discussed in section one of the review (see pp. 14-18). This section concludes with examples of best practice in order to demonstrate the application and outcomes of successfully and carefully planned HEI-employer collaborations.

Examples of best practice

The following examples include a range of HEI-employer collaborations taken from different global contexts. Included are: a research project between the Technical University of Munich and Audi (Figure 26), an HEI-employer curriculum development collaboration at the University of Wolverhampton in the UK (Figure 27), and an apprenticeship programme run by BMW based in the US (Figure 28). Whilst these case studies offer distinct approaches and detail, this review has also provided a more comprehensive list of further case study resources (see Appendix 1 in "Researchers' Toolkit").

Audi and the Technical University of Munich research project
Audi proposed a "deep and strategic collaboration with the Technical University of Munich (TUM)" in 2004 (Edmondson et al., 2012, p.22). This involved the establishment of an institute which would "support over 100 PhD students working on technology and innovation issues vital to Audi's competitiveness" (ibid). The collaboration involved Audi "invest[ing] in the infrastructure", the university encouraging "faculty to work closely with Audi", and the government "providing a site" (ibid). The collaboration is managed by a "strategic steering committee" who meet "twice a year to define areas of research interest, review progress, address problems and discuss goals" (ibid). In their 'lessons' or recommendations, the partners suggest that "defin[ing] a clear strategy and listen[ing]", and "meeti[ing] and talk[ing] regularly" are key (p.23).

Outcomes:

▸ There has been a "steady flow of technology process innovations built into Audi's cars and production lines";

▸ "Improved competitive edge";

▸ An "enhanced exchange of knowledge";

▸ A "highly successful recruitment channel", with "80% of candidates stay[ing] with the company following three years of work on their PhD";

▸ "Successful replication", as the concept has been transferred to sites in China and Hungary" (Edmondson et al., 2012, p.23).

Figure 26. Audi and the Technical University of Munich, Research Project HEI-employer collaboration (Edmondson et al., 2012, pp.22-23)

| **The accelerating change in built environment education (ACBEE)** |
| **HEI-employer curricular collaboration at the University of Wolverhampton** |

The Virtual Design Enterprise Centre at the University of Wolverhampton has worked with a local building contractor as part of an HEI-employer collaboration. In so doing, the collaborative project has employed the framework promoted by the ACBEE initiative, through which "industry and universities can work collaboratively to provide a more relevant educational curriculum" (ACBEE, 2006, cited in Heesom et al., 2008, p.34).

- The ACBEE framework is comprised of the following stages:
  "Awareness Activity – activity of a marketing/public relations nature;

- Ad-Hoc Engagement – opportunistic and expedient engagement;

- Formal Agreement – planned activity with structured identifiable objectives;

- Partnership – formal agreement in existence between two or more parties, with identified objectives and benefits but with no formal measurement;

- Strategic Alliance – formal agreement between two or more parties with certain consideration to both parties. There is measurement and achievement or objectives and a realisation of an intended strategic outcome"

(Heesom et al., 2008, p.35)

Outcomes:

In undertaking the aforementioned ACBEE process, the following activities and outcomes took place:

- "A series of seminars was developed to promote advanced technology to local SMEs within the construction sector, in a bid to engage and enhance awareness of smaller companies with new and emerging techniques;

- Following these awareness activities, one company engaged with postgraduate researchers to implement some advanced ICT and visualisation tools to review how these may improve the design process;

- This subsequently proved successful and the company sponsored a prize and set a challenge for postgraduate students to develop a visualisation solution for design review and subsequent marketing for a specific project;

- ...Throughout these phases, the University and the company were continually developing a more in depth relationship and this subsequently lead to the development of a Knowledge Transfer Partnership (KTP) with the School which received support from the Department of Trade and Industry (DTI) and is ongoing" (Heesom et al., 2008, p.35).

Through engaging in this collaboration, the HEI benefited in several ways. For example, "students have been exposed to the real life implementation of the technology" they often encounter in lectures and workshops (Heesom et al., 2008, p.36). The HEI has also increased its capacity to implement new and emerging research technologies in a live commercial environment. Lastly, through this collaboration, the University of Wolverhampton has extended its "research portfolio through the development of a KTP research project" *(ibid)*. In so doing, it has "enhanced the research provision of the department", affording more academic staff the opportunity to engage in knowledge transfer activities *(ibid)*.

Figure 27. HEI- employer collaboration, University of Wolverhampton and local contractor (Heesom et al., 2008, pp.35-36)

BMW, Spartanburg, US The adoption of the German model of apprenticeships
The Economist Intelligence Unit (2014, p.11) provides a case study involving apprenticeships in the United States. Drawing upon the apprenticeship model associated with German firms such as "BMW, Volkswagen and Siemens", the report details the transfer of this model to the US. In so doing, it gives the example of the BMW-operated Spartanburg plant in South Carolina, US. "Workers there build 300,000 cars a year, 70% of which are exported". An apprenticeship programme was started in 2010, involving "partnerships with three local technical colleges, driven by the company's need for skilled workers to operate the high-tech equipment central to its manufacturing process". In so doing, the "BMW Scholars Programme" was set up, encompassing, "a selective apprenticeship that takes only 20-25% of applicants". Successful applicants then receive "tuition assistance from the company and combine study for a two-year degree with up to 25 hours a week of work at the facility.".
Outcomes: ‣ This German-inspired model is said to "allow students to split their time between on-the-job training and classroom study"; ‣ The apprenticeship programme often leads to "career-long, well-paying jobs in the industry", which is reflected in the statistic that "all 26 students who have gone through the [BMW Scholars] programme so far have accepted offers for permanent positions".

Figure 28. BMW, Spartanburg, U.S apprenticeship programme (The Economist Intelligence Unit, 2014, p.11)

Barriers to Best Practice

Whilst many examples of best practice of HEI-employer collaboration exist, the literature also lists a number of obstacles that such joint ventures face. A number of frequently-cited challenges or obstacles to HEI-employer collaboration that emerge are summarised in Table 4.

Source	Barriers to HEI-employer collaboration
Employer experiences	
The Economist Intelligence Unit (2014, p.18)	"Policies or red tape that slow down or inhibit initiatives"
	"Negative attitudes inside my company about the likely return on investment"
	"Concern about investing in education that might not directly benefit the company e.g. Investments in students who won't become employees"
	"Employee lack of interest in participating in education or training programmes"
	"Budgetary or financial constraints"
	"Difficulty measuring success"
Mitchell (2011, pp.3-5)	"Poor communication"
	"Lack of time or other resources"
	"Timing" - in particular concern around academic timetables and the structure of the academic year
	"Students' skill level"
Hogarth et al. (2007, pp.11-12)	"Difficulty in identifying 'who does what'"
	When links are established, they are "vulnerable to staff turnover" and thus "difficult to maintain"
	The HEI can be viewed as "deficient in terms of customer service, project management and delivery to agreed timetables "
	There may be "disagreement[s] over Intellectual Property"
HEI experiences	
Lambert review (in Hogarth et al., 2007, pp.11-12)	"Protracted negotiations about Intellectual Property ownership and value"
	Businesses may have "unrealistic expectations"
	Businesses may "not [be] prepared to bear the full economic costs of research and other activities"

CBI (2009, p.20)	"Small businesses are struggling to make links with universities"
CBI (2009, p.7)	Smaller firms face challenges in terms of having no "dedicated HR function", not being "aware of the support for placements available from many universities"
Wilson (2012, p.28)	"The needs of the business do not align with the mission and strategy of the university"
	"Contrasting views on the management of indemnities and liabilities"
	"Mismatch in expectations and objectives"
Student experiences	
Docherty (2014, p.2)	A large proportion of students want placements but "fewer than half receive them"
	Many "students claim to have secured their work experience themselves or via their family rather than through any formal relationship" with their HEI
Flynn (2014, p.5)	Placements "can become mechanistic, bureaucratic, logistically challenging and students can be seen as a burden in placement, not as a potential investment in a future employee"

Table 4. Barriers to HEI-employer collaboration

In addition to these barriers preventing implementation of HEI-employer best practice, the literature also reflects upon the degree choices offered by HEIs as a notable factor in the level of "success" in "enhancing employability skills of graduates" (BIS, 2011, p.81). This is illustrated in the BIS (2011, p.7) report, which, in surveying "414 career advisory staff from institutions in 25 countries", posed the question "which courses/subject areas are more successful in enhancing employability skills?" (p.82). The results, and some global comparisons, are depicted in Figure 29.
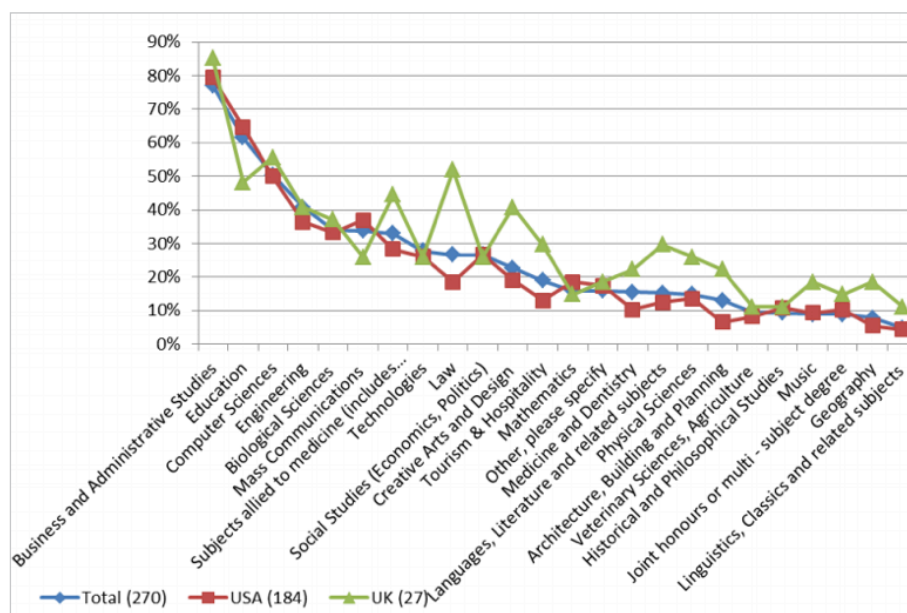
Figure 29. Which courses/subject areas are more successful in enhancing employability skills? UK and U.S compared to All responses (BIS, 2011, p.82)

As illustrated, the level of engagement in seeking to develop employability skills varies considerably depending upon the degree subject and location. Respondents were asked why they believed there was a "differential engagement of subjects with employability" (2011, p.83). Responses included "highly engaged subjects" were "designed specifically to include access to the workplace" *(ibid)*. These comparative trends may reflect the more "integrated nature of employability" in locations such as the UK.

Whilst BIS (2011, p.82) warns that "there is insufficient data here to draw firm conclusions", it is evident that further research exploring the "relative engagement of subject disciplines with employability activities" would be of great value. Such data provides a useful thinking point for HEIs and employers who may wish to create partnerships to redress the employability skills imbalance across disciplines. This sentiment is reflected by Docherty (2014, p.3) who calls on practitioners to "build up connectivity at a sector level", and to acknowledge that "what is relevant to an engineering course is not so relevant in a fashion design module". Docherty further stresses the importance of adapting HEI-employer collaboration depending on the degree subject or sector.

Whilst there are numerous existing and fruitful HEI-employer partnerships, several surveys have sought to ask employers specifically about the steps HEIs could take to both encourage and better facilitate such ventures. Employer responses have included:

▸ Making "qualification programmes that are more relevant to business needs";

▸ Routing any "apprenticeship grant from the government...directly to employers";

▸ "Reductions in bureaucracy";

▸ "Greater flexibility for employers to design frameworks"; and,

▸ "A clear definition of what an apprenticeship means" (CBI, 2013, p.52).

HEIs may therefore wish to consider these concerns when communicating their collaborative goals with employers. Further advice regarding the nuances of HEI-employer collaboration can also be found at the European Commission's 'University Business Cooperation' website, (European Commission, 2015a, n.p.).[14] The website is especially valuable to those interested in the wider agenda of university-business collaboration, including issues beyond employability.

This section has reviewed literature concerned with how HEIs can build relationships and collaborative pathways with employers and it has highlighted both the business cases and value of HEI-employer collaborations. It has gone on to illustrate a range of modes through which such collaborations exist and a number of case studies illustrating best practice. Finally, it has flagged a range of barriers to best practice in order to facilitate better communication and relationship building between HEIs and employers.

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[14] The European Commission's 'University-Business Forum' was created to facilitate the sharing of good practice amongst all stakeholders in this area and (HEIs, student-led bodies, employers, Government etc.) and has convened regular thematic forums since 2008, all of which are documented on their website. For details see: ec.europa.eu/education/tools/university-business_en.htm

Section Five:

Measuring Impact

> ❝ *[Employability] is not something that can be quantified by any single measure."*
>
> Cole and Tibby, *Defining and developing your approach to employability: A framework for higher education institutions* (HEA, 2013, p.6)

Within and beyond HE institutions there are a series of metrics and mechanisms often used to compare and assess the quality of careers and employability service provision across different institutions. These include league tables, graduate destination surveys, quality assurance agency and professional body recommendations, and awards programmes. Many academic studies containing empirical data also exist. The choice of metrics and measurement systems varies greatly, depending on the country or region. Examples of these metrics have been tabulated in Appendix 2 (see pp.88-92). Following an overview of these methods of evaluation, the final part of this section briefly reflects upon the limitations of such metrics.

Measuring employability

League tables

There are, of course, numerous global, continental, regional, and national HEI league tables, many of which have the capability to rank universities by their careers and employability service provision. Commonly-cited *global* league tables include the QS World University Rankings, in which users can rank universities by 'employer reputation' (and by faculty, region, location)[15], and The Global Employability University Survey[16]. There are many other league tables used on a national scale only, which can provide further insight into reputation and successes within national contexts.

Graduate destination surveys

In addition to league tables, comparative analysis of HEIs often draws upon graduate destination surveys, also known as 'career tracking surveys' or 'tracer studies' (EACEA, 2015, p.19). This report also provides an overview of graduate tracking surveys that exist in Europe (p78). Such surveys contain questions regarding: the 'quality' of jobs, the period of job-searching, and the job skills requirements *(ibid)*. In so doing, they utilise the "self-assessment" of graduates, and are often understood as the "most accurate tools available for evaluating employability" *(ibid)*. Examples of such surveys include the Destination of Leavers from Higher Education (DLHE), which surveys UK HEI leavers on their employment status six months after graduation using a standardised questionnaire.[17]

There are also surveys conducted by independent research firms, such as High Fliers Research, who also operate within the United Kingdom. As part of their 'UK graduate Careers Survey', for example, High Fliers Research interview, face-to-face, around 18,000 final year students regarding their career aspirations.[18]

Quality assurance agencies

Quality assurance agencies aim to evaluate and guide careers services and employability provision, influence related policy, and encourage best practice. Such agencies act as "important mechanisms" through which HE institutions can be encouraged to "enhance the employability of their graduates" (EACEA, 2015, p.20). These bodies tend to operate at a national level. Within South Africa, for example, the South African Qualifications Authority (SAQA) oversee development and implementation of the National Qualifications Framework (NQF) (Playfoot and Hall 2009, p.47) and Careers Advice Service (CAS), which have together provided training workshops on 'basic career development: concepts and applications' (SAQA, 2014).[19] Equally, within Canada, the Canadian Association for Co-operative Education (CAFCE) is a national forum seeking to establish standards and co-operative programmes across its 79 post-secondary member institutions (BIS, 2011, p.26).[20]

Within the UK, the Quality Assurance Agency for Higher Education (QAA) is the independent monitoring and advice agency for HE.[21] Across a number of their reports, the QAA (2014a, 2014b) have identified 'student employability' as a key theme worthy

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[15] QS World University Rankings can be seen at: www.topuniversities.com/.

[16] The Global Employability University Survey can be seen at: emerging.fr/rank_en.html

[17] Information about the Destination of Leavers from Higher Education (DLHE) see: www.hesa.ac.uk/stats-dlhe

[18] For information regarding High Fliers, see www.highfliers.co.uk/. High Fliers reports are available for purchase. They have however released a freely available report entitled, 'The Graduate Market in 2015', available at: www.highfliers.co.uk/download/2015/graduate_market/GMReport15.pdf

[19] For information about the South African Qualifications Authority (SAQA) see: www.saqa.org.za/show.php?id=5658. For information about the training workshops see: www.saqa.org.za/docs/guide/2014/fet-basic-career-guide-v2.0-23022013.pdf

[20] For information about the Canadian Association for Co-operative Education (CAFCE) see: (see www.cafce.ca/about-us.html)

[21] For information regarding the Quality Assurance Agency for Higher Education (QAA) see: www.qaa.ac.uk/about-us

of further investigation. In the 'suggested ways forward' section of their report entitled 'E*mployer Engagement: Emerging Practice from QAA Reviews*', the QAA (2014a, p.28) have advocated both monitoring the impact of employer engagement, and utilising this information as an institutional performance monitoring tool. Similarly, within the United States, the National Association of Colleges and Employers (NACE) identifies best practice and quality benchmarks in the area of graduate employability.[22]

Professional bodies

A number of professional bodies for HE careers and employability practitioners and graduate employers exist on both sides of the HE-business interface. These 'communities of practice' are often a unique and invaluable source of information and provide professional development opportunities and research that are key for their members and the sector they represent. Whilst knowledge residing within these associations might not always be available in conventional literature form, the websites of these organisations can often be a unique source of information and contacts for the purpose of further research. The table in Appendix 2 provides examples of the more prominent associations that exist around the globe.

There are also organisations operating at an international level. For example, The International Centre for Career Development and Public Policy (ICCDPP), established in 2004, seeks to promote and improve "policies and systems for career development services in the fields of education, training, employment and social inclusion" in collaboration with, and for, "policy makers, researchers and career development professionals" (ICCDPP, 2015, n.p.).

In preparation for their 2015 Symposium, the ICCDPP prepared a report exploring several key policy areas, one of which was the 'return on investment (ROI)'. ROI is thus emerging as another measure of careers and employability service provision. In preparing their report, authored by Sampson (2015), the ICCDPP engaged with representatives from fifteen countries, who synthesised "the policy areas" and "highlighted key findings across countries".[23] Those surveyed were asked, "Why does return on investment (ROI) matter?". The ICCDPP then collated and reflected upon global examples of both 'promising' ROI measurement practices and 'emerging challenges' (Sampson, 2015, pp.2-3).

Examples of promising ROI measurement practices listed include, the inclusion of "both quantitative and qualitative measures", the adoption of "a wide variety of performance measures", and the value of selecting "what is important to measure, rather than what is easy to measure" (p.2). Conversely, the challenges identified were that a number of the measurements of ROI "lacked adequate specificity, relevance, and quality", and that it is also difficult to 'link interventions to outcomes' (p.3).

Ultimately, the ICCDPP report asserts that whilst the ROI is a valuable metric, currently more is known "about what constitutes the challenges...than ...about emerging promising practices" (Sampson, 2015, p.3). The report thus identifies some key areas for continued exploration in the areas of "practice, research, and policy" (p.4).

Awards programmes

In addition to these metrics and measuring mechanisms previously described, there is also a growing recognition and proliferation of awards programmes seeking to reward global and national examples of best practice in the area of student employability. For example, the Reimagine Education Awards is a global HE competition seeking to reward innovative approaches to HE pedagogy and projects enhancing employability.[24]

There are also numerous national award competitions. Within Australia, for example, NAGCAS hold a national competition entitled the 'Best Practice Award', in which Australian institutions' career services are encouraged to showcase "innovative projects and activities", and in so doing, compete for a $1,000 prize.[25] Within the UK, the Association of Graduate Recruiters (AGR) 'Graduate Recruitment Awards' seek to raise standards, and for entrants to gain industry recognition, a competition in which a number of universities enter.[26] The AGCAS 'Awards for Excellence' are designed to showcase and promote good practice across UK institutions[27] whilst the National Undergraduate Employability (NUE) Awards are designed to reward UK institutions that showcase innovative careers provision projects delivered by both HEIs and employers.[28] Lastly, within the UK a number of the national newspapers run annual university competitions with relevant employability awards, including the Guardian's 'employability initiative' in

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[22] For information regarding the National Association of Colleges and Employers (NACE) see: www.naceweb.org/. NACE (2015) encompasses a network of "more than 6,300 college career services professionals at nearly 2,000 colleges and universities nationwide", as well as "more than 2,700 university relations and recruiting professionals, and the business affiliates that serve this community."

[23] The countries providing input for the ICCDPP reports are: AsiaPacific, Austria, Canada, Denmark, Estonia, Finland, India, New Zealand, Nigeria, Qatar, Saudi Arabia, South Korea, Tunisia, the United Kingdom, and the United States (Sampson, 2015, p.1).

[24] For information about the Reimagine Education Awards see: reimagine-education.com/the-winners

[25] For information about the NAGCAS 'best practice awards' 2014 see: www.nagcas.org.au/conference/conference-2014/best-practice-awards-2014

[26] For information about the AGR awards see: www.agr.org.uk/Graduate-Development-Awards

[27] For information about the AGCAS awards see www.agcas.org.uk/pages/agcas-awards)

[28] For information about the NUE awards see: nueawards.co.uk/winners.php

their 'University Awards'[29], and the Times Higher's 'Outstanding Employer Engagement Award' in its 'Education Awards'.[30]

Academic articles

Lastly, a number of academic articles and publications contain interesting and relevant empirical studies and data, though, as Taylor and Hooley (2014, p.188) note, "the empirical evidence that exists around the impact of employability initiatives is [currently] limited". Those interested in this area may begin by consulting the following: Hall, Higson and Bullivant (2010); Mason et al. (2009); Taylor and Hooley (2014).

Due to the vast sources of information mentioned in this section, the literature review has provided a comprehensive table of the measurement indicators in "Researchers' Toolkit" (Appendix 2). Whilst it is by no means a definitive list, it should nonetheless provide a useful tool for those seeking to pursue specific avenues of impact measurement, or for those looking to get an overview of the sector.

Measurement limitations

Whilst the metrics associated with the measurement of the impact of careers and employability service provision are valuable in various contexts, and frequently cited, the literature also identifies limitations associated with such metrics. For example, when discussing the DLHE graduate destination survey, a number of commentators have described the metrics obtained as "crude" and "simplistic indicators of employability" (see discussions in Taylor & Hooley, 2014, p.491; Jameson et al., 2012). Whilst acknowledging that they provide valuable insight, such discussions point to the temporal limitations of such metrics, in that they represent only a "snapshot in time" (Taylor & Hooley, 2014, p.496). As such, it has been called for the recognition that such surveys provides a "measure of employment" rather than capturing the full complexity of employability (Cole & Tibby, 2013, p.6).

Such critiques reflect the assertion that measuring employability and employment progression more widely, remains a difficult exercise involving the consideration and assessment of a complex set of skills, attributes, and dynamic processes. To illustrate this complexity, the measurement of employability might be contrasted with the process of undertaking an academic programme in which a student is required to pass defined milestones and provide continual evidence (in the form of coursework, seminar participation and examinations), allowing for a simpler assessment and measurement of skill. The quantification of 'results' and division of 'acquired' knowledge is more complicated in the process of employability progression. Therefore, there

is the suggestion that in measuring careers development, different indicators or understandings of impact are required.

An illustration of the inherent difficulties in evaluating HE employability interventions is highlighted by Harvey (2001, p.103) who challenges the validity of using 'graduate destination tracking' as a metric to validate how effective a university in assisting a graduate into a job. To illustrate these limitations, Harvey cites nine factors that may affect on the propensity for an individual to gain a job. These include: type of HEI; mode of study (full-time vs part-time); student location and mobility; subject of study; prior work experience; age; ethnicity; gender; and social class.

As a reflection of such concerns regarding the robustness and effectiveness of such measures in adequately capturing graduate employability achievements and accomplishments, a growing body of literature in the area of 'learning gain' is emerging. 'Learning gain' can be understood as an approach to metrics concerned with measuring the 'distance' a student has travelled 'before and after' engaging in a given activity or spanning discrete periods of time within HE, by considering and assessing a variety of attributes and analytics reflecting a student's progress and success (see HEFCE, 2015; Grove, 2015). 'Learning gain' has been referred to as utilising a set of indicators in order to assess the "value-added" of HE engagement (Grove, 2015, n.p.). Such approaches are gaining ground within the global HE agenda given the increasing costs and fees associated with tuition, and the resultant desire to demonstrate return on investment (HEFCE, 2015; Grove, 2015).

Capturing the nuances and complexities of an individual's career development journey and applying effective measuring tools to assess the impact of interventions facilitated by HEIs and stakeholders will be key in order for the sector to take the next step change to improving services that benefit the student and employer. It should therefore be a priority for HEIs to better understand the emerging benefits of learning analytics to inform the development of their own 'career' learning gain models.

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[29] For information about the Guardian's University Awards see: www.theguardian.com/higher-education-network/series/guardian-university-awards-2014-ideas-bank

[30] For information about the Times Higher's education awards see: www.the-awards.co.uk/the2014/awardswinners/2014-winners#

Section Six:

Directions

Concluding remarks

This report has provided a review of literature in the area of employability skills provision in the context of the global HE landscape. Throughout, the report has sought to identify the most relevant examples of practice in the sector. We hope that this review will provide a valuable toolkit for universities and HEIs, encouraging and facilitating the sharing of best practice in the future.
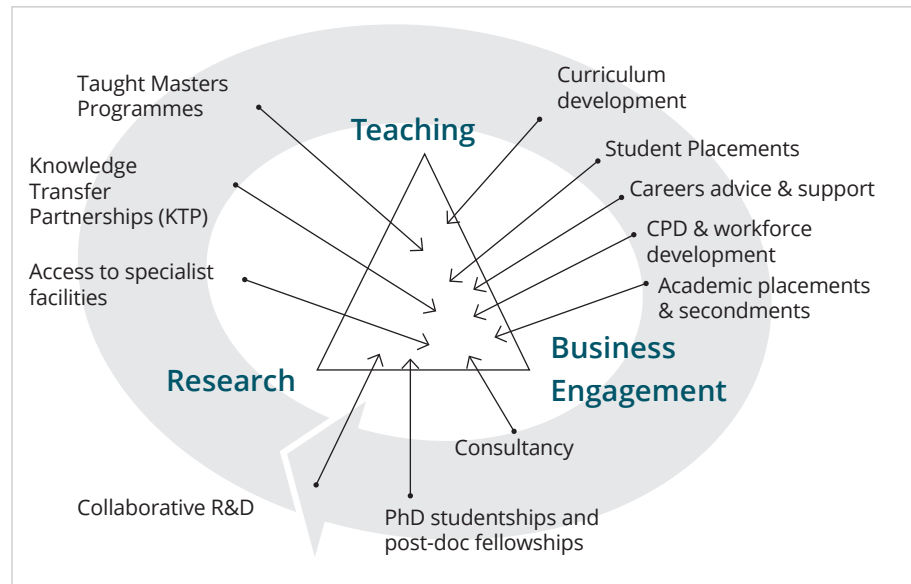
Figure 30. An integrated approach to employer engagement (Bolden et al., 2009, p.4)

This review has highlighted best practice identified within the literature reviewed. In so doing, it has focused upon several key areas; the holistic institution, the curriculum and pedagogy, and employer engagement. In the diagram above (Figure 30), Bolden et al. (2009, p.4) neatly visualise these interlinked and symbiotic areas, and their connections. The findings of this literature review are in line with the ethos behind this model. As such, this review, reflecting the literature, "supports the notion that where the various offerings of HE are integrated – informing and shaping one another – then they stand a greater chance of long term success" (Bolden et al., 2009, p.45; see also Cole & Tibby, 2013; UKCES, 2009).

In demonstrating these connections, this report has highlighted and reflected upon various aspects of the changing landscape of global HE. In the final section, emergent areas for further consideration are recognised.

Future directions

The literature review has revealed a number of conditions and factors affecting the global HE landscape which hold important considerations for careers and employability practitioners and service providers. In this final section, emergent areas that the literature points to for further consideration are raised with the prospects of further examination being required.

The internationalisation of HE

> " *Higher education is a growing market worldwide, with predictions that almost 6 million people will be seeking an international higher education experience by 2020.*"

Professor Rick Trainor, President, Universities UK, 2008, qtd. in *Employability for International Students: An Introduction to Finding Work in the UK* (Guidance and Employability Team (GET), 2013, p.1

A growing concern has been highlighted regarding the importance of considering a changing student demographic - specifically, the growing numbers of international students that many global institutions are increasingly seeking to attract (Arrowsmith et al., 2011, p.366).[13] This institutional "drive to internationalize" results in a group of students who "desire international employability" skills *(ibid)*.

To this end, Huang et al. (2014, p.175) have published a paper outlining the importance of attending to the "employability of international students". Huang et al.'s paper focuses upon the growing number of international students attending universities within the United Kingdom.[14] Whilst focusing upon mainland Chinese international students in UK HEIs, the paper and its associated survey results, raise a series of points valuable for consideration to internationalising institutions more widely. For example, following the analysis of their extensive survey work (see footnote 32), Huang et al. offer a series of recommendations to universities with growing international student cohorts.

These recommendations include: understanding the views of international students regarding their approaches to employability[15], researching the career preferences of international students, and tailoring and emphasising institutional courses

in relation to these potential future careers (Huang et al., 2014, pp.189-190). Within the context of their study, Huang et al. also propose that there are "significant differences" in both the "understanding of employability" and the "initiatives to develop" international student employability within "research-intensive" and "teaching-centred universities", providing each type of institution with additional thinking points regarding their employability provisions for international students (p.189).

The HEA (2014), in their short report entitled "*Employability and next steps*" have similarly provided a series of recommendations to (UK) institutions seeking to develop the employability of their international students. Recommendations include the use of 'personal development planning' and 'work placements and volunteering' (HEA, 2014, p.5). The report also provides a valuable list of resources focused around 'impact' for further reading *(ibid)*. They also highlight resources such as the University of Manchester's careers blog for international students and AGCAS' 'internationalisation community'. [16] In response to such publications, universities and university-affiliated organisations within the UK are increasingly issuing tailored employability guidance for their international students (see GET, 2013; NUS, 2012; Sheffield Hallam, n.d).

In addition, the European Union (2014), in its "*Erasmus Impact Study*", has tried to take into consideration students who are participating in the ERASMUS programme regarding the internationalisation of HEIs. The report states that for 85% of students surveyed, enhancing their employability was a top priority.[17] The report also valuably identifies and overviews relevant literature and studies ascertaining to the 'impact' of Erasmus on employability (see European Union, 2014, pp.69-71). The growing number of students opting in to this international mode of study should be a consideration of any institution wishing to tailor their employability service provision to cater for this changing, increasingly international, student demographic.

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[31] This is particularly the case across institutions in "the English-speaking countries of the USA, Canada, Britain, Australia and New Zealand", who are driving the desire "to internationalize" (Arrowsmith et al., 201, p. 366).

[32] In their article, Huang et al. (2014, p.176) conduct a survey of "mainland Chinese students' understandings and approaches to managing their employability". In so doing, Huang et al. (2014, p.180) surveyed students from 25 UK Universities, collecting 449 usable questionnaire responses (both online and face-to-face) during the period of 1st October - 30th November 2012.

[33] Huang et al. (2014, p.189) found that 'skills', 'careerist' and 'ritualist' approaches to employability were most popular and common among the Chinese students surveyed.

[34] For information about the University of Manchester's careers blog for international students, see: manunicareersblog.com/about-the-international-blog/ , and for information about AGCAS' Internationalisation Community, see: www.agcas.org.uk/communities/13-Internationalisation

[35] The Erasmus Impact study carried out a (2013) survey of 78,891 individuals (including students, alumni, staff, institutions, and employers) across 34 participating countries (European Union, 2014, p.15).

How can HEIs meet the needs of small and medium enterprises?

> *I'm very concerned that students get to know what it's like working in a company, it helps them to understand what's going to happen when they graduate. If they come into the workplace totally unaware of business, it can be a big stretch for them. I think it's very important to encourage business and education to link up."*

Anne Duncan, Yellowfin's chief executive (SME)
qtd. in *Future Fit* (CBI, 2009, p.32)

Another significant direction revealed in the literature is that of accommodating the needs of Small and Medium Enterprises (SMEs). SMEs are increasingly being recognised around the world as "drivers of growth and job creation" (OECD, n.d.). Within the European Union alone, it is estimated that there are approximately 20 million SMEs compared to only 77,000 large companies employing over 250 employees. SMEs also created 85% of new jobs in the EU between 2002 and 2010 (Clements, 2013, p.95). As such, a number of reports in the literature reviewed recognise the need to consider and accommodate SMEs in the discussion of graduate employability.

Unlike international companies that often recruit on the basis of competency lists, shared across branches and continents, SMEs tend look for someone who will make reasonable impacts on their business. Whilst SMEs are fruitful areas for further consideration, the literature also identifies challenges associated with "engaging smaller firms", particularly those without "a dedicated HR function" (CBI, 2009, p.7).

One of the specific challenges identified includes the fact that "SMEs may not be aware of the support for placements which is available from many universities". Reflecting this, HESCU (2010, p.20) noted that "less than a quarter (23%) of SMEs involved local universities and colleges in their graduate recruitment process". This number is significantly low considering that SMEs in 2010, for example, accounted for the employment of 23.1 million people in the UK (p.14). HESCU (2010, p.20) additionally highlights "the untapped potential for greater higher education-SME collaboration, particularly as most universities and colleges are attempting to engage with businesses on a number of other fronts such as contract research and workforce development" (p.20).

Attempts to address this 'untapped potential' are yet to be documented in a comprehensive or sustained way within the literature, and thus further exploration of this area provides a direction for future literature. This sentiment has since been echoed in the AGCAS Biennial Conference, in which a session featured discussions entitled, 'SME: the untapped employability resource'. The slides accompanying this session detail the biggest barrier to fruitful SME-HEI collaboration, which is SMEs' understanding of the "benefit of working with HEIs", and the creation of a "clear proposition" (Bacon & Reali, 2013, slide 16). This discussion was summarised in the presentation (Figure 31).

Figure 31. University of Birmingham "SMEs: An untapped employability resource?" Presentation by Bacon & Reali. Conference Proceedings. Slide 16

These goals, aims, and barriers illustrate avenues for further exploration within the literature, which at present contains a dearth of comprehensive exploration of the 'untapped potential' of SMEs in terms of graduate employability and employment.

Globalisation versus the growth of SMEs globally

SMEs often require specific skills and look for individuals who will fit the gap in their business. A BIS report on "*Graduate Recruitment to SMEs*" highlights research into the value of graduates for SMEs (2011, pp.13-16). BIS suggests that there are a number of reports which demonstrate the potential contribution and value of graduates to SME development. For example, BIS cite Hanage et al. (1994) and their suggestion that "graduates employed in SMEs make a major contribution to the success of the organisations" therefore "increasing the numbers of recent graduates employed in SMEs would lead to SME success, economic growth and the personal development of graduates" (2011, pp. 14-15).

This focus on personal development and smaller scales of success could be considered somewhat at odds with the rise of common graduate competencies required by multi-national organisations. International businesses are seen to more commonly recruit on a set of graduate competencies and look for leadership in all applicants. For example, PricewaterhouseCoopers (PwC) have established a framework of core competencies that they expect "people, at all grades and all areas of our business" to have as they "expect all of [their] people to be leaders" (PwC, n.p.). These 'core competencies' are depicted by PwC in the visual below (Figure 32).

Figure 32. PwC Professional leadership framework: What Skills We Look For? (PwC, n.p.)

PwC is not alone in highlighting the need for "global acumen" in its ideal job candidate. Comments from HSBC (cited in Diamond et al. 2008 p.5) provide another example of an international company expressing the need for "its graduates need to have additional 'global competencies', as well as the traditional capabilities employees have always had". In terms of international companies the desire for "development of global leaders" takes centre stage in conversations about employability.

SMEs, conversely, cite more diverse graduate skillsets in recruiting requirements (CBI, 2009, p.7). Each organisation has differing requirements, and often global leadership may not always be a key priority in hiring for specific SME roles. Defining and developing employability skills in the context of SMEs specifically is therefore of the utmost importance. In a similar vein, an HECSU survey found that "SMEs prioritise the skill set (47%) and work experience (34%) of graduate applicants over the qualifications

held or the institution attended" (2010, p.15). Such results point to need for institutions to carefully consider this context of SMEs, and to encourage further clarification of skill-sets.

HEIs have much to gain by collaborating and partnering with both SMEs and global business on behalf of their students and graduates. HEIs should therefore aim to provide graduates with relevant understandings of such nuances regarding the demands of both the local and global labour market. In this same context, when HEIs state that their students and graduates will acquire a defined set of 'graduate attributes' specific to the institution, the HEI should ensure that students are made aware of 'where' and 'how' these will relate to the career aspirations of the students and the needs of the labour market.

Refining the measurement of impact

Section five (Part Two: Measurement limitations) highlights the inherent limitations in many of the methods currently used to measure the impact of institutions upon the employability development of their students and more frequently, the use of employment destinations data and rankings as a proxy for such evaluation.

As the literature suggests, there are many flaws inherent in many of these approaches. However, whilst the myriad of factors cited by Harvey (2001) that affect an individual's career prospects still exist, the sophistication and detail of many of these instruments have been improved incrementally over recent years. Student registry systems and customer relationship management (CRM) systems used by HE careers services increasingly contain more detailed and useful data regarding a student's engagement in the employability agenda, their career preferences, vacancies viewed, and extra-curricular activity engaged in. As these datasets increase in scope and record entire student journeys through an individual's university experience, opportunities start to arise permitting both the data mining of multiple CRMs and the use of learning analytics. Whilst acknowledging that these methods and tools are still in the early stages of development, these systems, together with developing concepts around 'learning gain' evaluation, present a useful vision and focus of research to assist students in their career planning (and by default, employers too).

Defining the HE employability ecosystem

An explicit aim of the literature review has been to highlight good practice of career and employability provision across the global HE landscape and where possible, to identify the critical success factors and delivery models that enable them to achieve their desired impact.

The report has also sought to surface the main drivers and strategic rationale for these approaches. Even on a national basis this agenda is vast. From a global perspective this becomes ever more complex. Acknowledging limitations of the review methodology already cited, the report has taken a 'broad-brush' approach in examining relevant literature in order capture and represent the wide range of components that might be considered key creating an effective employability ecosystem.

The complexity of the drivers, stakeholders, strategic motivations and numerous relationships that contribute to an institution's employability agenda is illustrated in Figure 33.
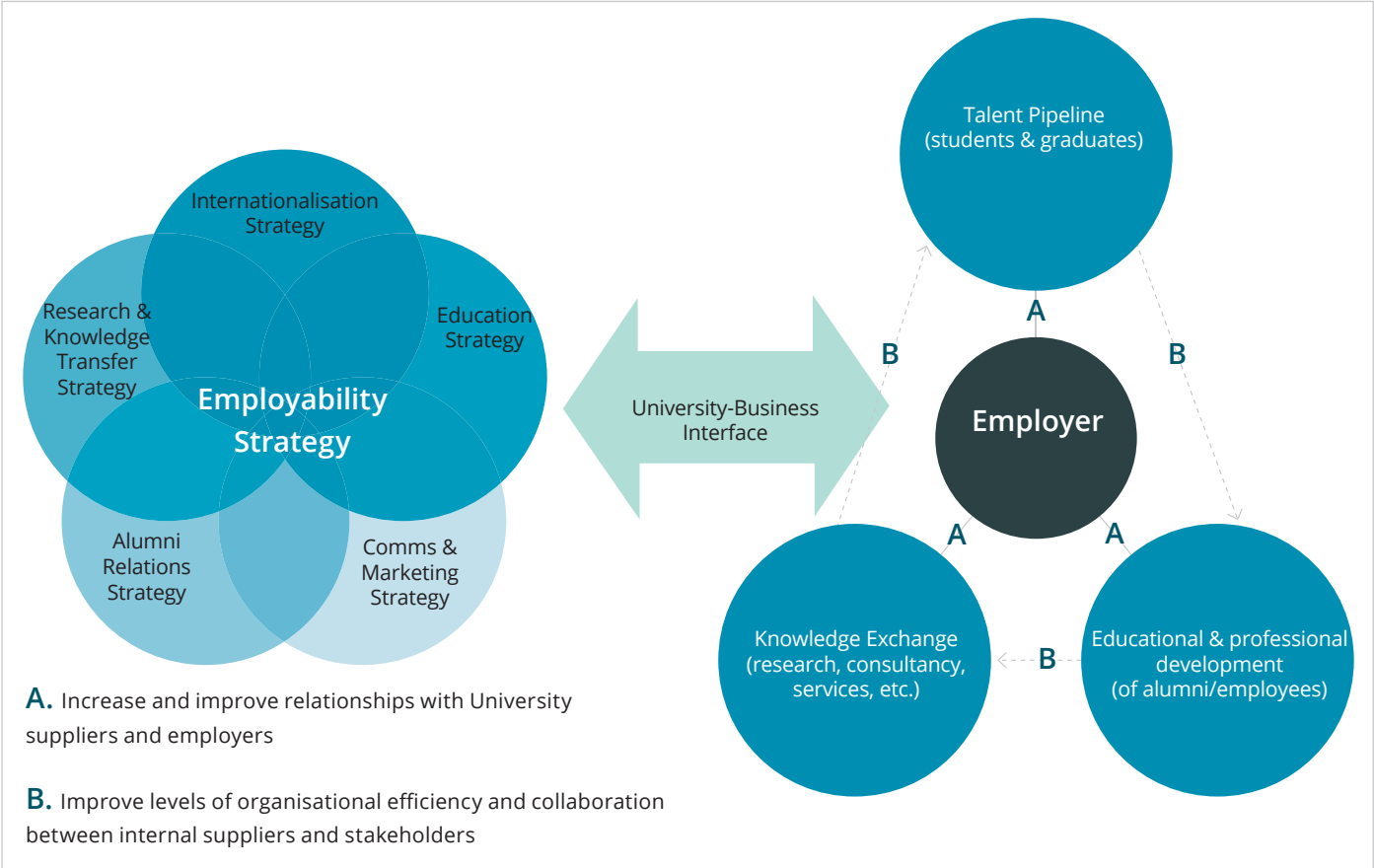
Figure 33. Illustration of the strategic components and stakeholders that make up the HE employability ecosystem (adapted from Blackmore, 2015, p.36)

The vector diagram on the left of Figure 33 provides examples of the discrete strategic considerations which will influence the investment, resourcing, focus and prioritisation that in turn will influence the scope of an institution's engagement in this agenda. These elements influence the internal governance and management of the institution's employability strategy and are as such often determined by the nature of the overarching university mission and the balance between its main strategic priorities, namely, Research, Education and 3rd mission, also referred to by the European University Association (2010, p.1) as: research, teaching and learning, service to society and support services.

The Knowledge Skills Triangle on the right illustrates the external-facing relationships and interactions that relate to the employability agenda. It demonstrates the symbiotic relationship between the developments of the student and graduate career path and their connection, or prospective role that they play, as part of the HEI's external relations, services and HEI-business partnerships.

The links denoted by the label 'A' represent the interface for employers with the HEI, namely around services relating to 'knowledge transfer or exchange', as a source for supplying their 'talent pipeline' and for the purpose of providing 'continuing education' for the professional development of their workforce. The links labelled 'B' represent the journey and direction of the career path for the student and graduate facilitated by the HEI. In terms of knowledge exchange services, students (undergraduate to post-doctorate level) can be an invaluable

and cost-effective way for employers to tap into the research and knowledge-base residing within higher education. The experience of the student taking the role of knowledge exchange agent then increases the propensity for the student to become employed in a graduate-level role.

Finally, as alumni, the individual may complete the 'student lifecycle' by then engaging once again with their alma mater in any number of ways including: further Continuing Professional Development (CPD); to procure 'knowledge exchange' services on behalf of their employer or own business; to provide 'good-will' contributions to the development of current students and; potentially to make financial donations to the institution as they progress through their careers. In summary, despite 'career development' provision being often embedded within 'teaching and learning' directorates whilst 'knowledge exchange' and CPD is embedded in research and 3rd mission structures, they are not mutually exclusive areas of activity as far as the work-preparation of students and graduates are concerned. As suggested earlier in this section, the integration of such provision and services is likely to create a multiplier effect in terms of facilitating the longer term success of such services and partnerships.

It should be noted that the knowledge skills triangle should not be confused with the significant amount of literature associated with the 'knowledge triangle' concept, defined by the European Commission (2015b, n.p.) which refers to "the contribution of higher education to jobs and growth, and its international attractiveness, can be enhanced through close, effective links between *education, research, and innovation*". However, there are many common references and the two frameworks share the same stakeholders.

The report has highlighted a number of employability and employer services that exist across the global HE landscape, often delivered centrally to students and many directly aimed at employers. Other provision may include a combination of career practitioners, academics, Student Unions and other HE professionals with external stakeholders also invited to contribute e.g. employers, alumni, professional associations, community organisations etc. Whilst there may be evidence to illustrate common approaches to 'what' and 'how' career and employability services are delivered, in contrast the literature holds limited examples discussing the strategic position of such services, how they are governed and how such multiple service providers and stakeholders are managed. For this reason there is an greater absence of evidence comparing the relative levels of impact that might help to determine which ecosystems and governance structures deliver the greatest outputs.

Due to this multi-stakeholder delivery framework (see also Figure 32), it is clear that the employability agenda straddles all mission aims, and arguably unlike most 'core' HE activity there might be any number of locations that this agenda and associated services might reside within across the HEI's management structure. The scope of this review has not included an examination of the kinds of organic and matrix management approaches that might need to be adopted to fully realise the benefits of such collaborative approaches, nor has it confirmed the degree to which these frameworks already exist or not.

This apparent position suggests that further research might be useful to surface different models, highlight good practice where impact is evident and provide further insight into discussions that might inform how HEI missions can be further aligned to serve this agenda more effectively. No doubt such research would assist the HE sector and governments around the world by informing approaches that are able to achieve greater cost-efficiencies, encourage the sharing of best practice, facilitate innovation and ultimately improve services to students, employers and the economy and society at large.

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Researchers' toolkit

Appendix One: HEI-employer collaboration resource

In this table, we have collated a range of HEI-employer collaboration resources.

HEI–employer collaboration resources		
Resource	**Details**	**Source/link**
Ball and Manwaring (2010)	This QAA Scotland commissioned report is a guidebook for Work-based learning. It contains definitions, strategic and operational guidance, and a variety of tools to facilitate implementation and review.	www.enhancementthemes.ac.uk/docs/publications/making-it-work-a-guidebook-exploring-work-based-learning.pdf?sfvrsn=10
BIS (2011)	This extensive report has a section exploring 'employer involvement in the curriculum', in which various global case study examples are detailed.	www.gov.uk/government/uploads/system/uploads/attachment_data/file/32421/11-913-supporting-graduate-employability-other-countries.pdf
CBI (2009)	In addition to exploring what universities and employers are doing to address growing employability needs, this report details 13 case studies of HEI-employer collaborations.	www.cbi.org.uk/media/1121435/cbi_uuk_future_fit.pdf
CBI (2011)	This report, based on an extensive survey, has a section exploring 'businesses and universities in a new era', which details survey results regarding business links with universities in terms of type and sector.	www.cbi.org.uk/media/1051530/cbi__edi_education___skills_survey_2011.pdf
CBI (2013)	This report, based on an extensive survey, has a section exploring 'putting business at the heart of apprenticeships'.	www.cbi.org.uk/media/2119176/education_and_skills_survey_2013.pdf
CIPD (2012)	A section of this report reviews the role of employers in engaging with young people and education.	www.cipd.co.uk/binaries/learning-to-work%20survey_2012.pdf
Cole and Tibby (2013)	This report provides a framework for the implementation of HEI employability goals, which may be of use for those developing HEI-employer collaboration.	www.heacademy.ac.uk/sites/default/files/resources/Employability_framework.pdf
European Commission (2015)	This report explores the state of European university-business cooperation. In so doing, it identifies 8 broad areas in which universities and businesses cooperate. 4 of these 8 themes are associated directly with the HE employability agenda. These include 'Mobility of students, Curriculum development and delivery, Lifelong Learning (LLL) and Entrepreneurship'.	ec.europa.eu/education/tools/university-business_en.htm
HESCU (2008)	This report includes a section on graduate schemes and internship opportunities in the voluntary sector.	www.hecsu.ac.uk/assets/assets/documents/PROP_Career_pathways.pdf
Mourshed at al. (2012)	This report includes a section on 'delivering skills the right way', which discusses various types of relationships between HEIs and employers.	mckinseyonsociety.com/downloads/reports/Education/Education-to-Employment_FINAL.pdf

HEI–Employer Collaboration resources		
Resource	**Details**	**Source/link**
NCUB (2015)	The National Centre for Universities and Business (NCUB) has an interesting piece on 'bridging the gap between university and employment' in their blog. In this the 'science industry partnership' is detailed as a case study example.	www.ncub.co.uk/blog/sip-blog.html
Playfoot and Hall (2009)	This report takes a global perspective in exploring the links between education and employment. In so doing, it explores the relationship between HEIs and employers through a number of global case studies.	www.eee-edexcel.com/xstandard/docs/effective_education_for_employment_web_version.pdf
Spada (2012)	This report includes a section exploring the provision of 'productive work experience and internship opportunities in a fair manner'.	www.professionsforgood.com/wp-content/uploads/2012/03/SocialMobilityToolkit-FINAL.pdf
The Economist Intellligence Unit (2014)	This report has a section exploring 'industry-university collaborations, past and present', detailing a range of international case studies.	www.luminafoundation.org/files/publications/Closing_the_skills_gap.pdf
UKCES (2009)	This report contains chapters dedicated to exploring both 'employer involvement' and 'programme design and delivery'.	http://webarchive.nationalarchives.gov.uk/20140108090250/http://www.ukces.org.uk/upload/pdf/EmployabilityChallengeFullReport.pdf
UKCES (2014)	This report contains chapter dedicated to exploring both why collaborations are valuable for higher skills development, and how to implement collaboration. In so doing, it draws upon a range of case study examples.	www.universitiesuk.ac.uk/highereducation/Documents/2014/ForgingFutures.pdf
Wilson (2012)	This report details a range of HEI-employer collaborations, including work experiences and placements, internships, and knowledge transfer partnerships. In so doing, it presents a number of case study examples.	www.gov.uk/government/uploads/system/uploads/attachment_data/file/32383/12-610-wilson-review-business-university-collaboration.pdf

Appendix Two: Measurements and metrics of student employability

In this table, we have collated a range of global metrics commonly referred to in discussions of measuring graduate employability. Names of the metric and information from the corresponding metric website link are included.

Measurements and metrics of student employability		
Name	**Information**	**Link**
Employability league tables		
Global Employability University Survey	This global ranking surveys over "2,200 recruiters from 20 countries" and "2,300 CEOs and Chairs" from the "top 1,000 companies in 20 countries" (Emerging 2014)	emerging.fr/rank_en.html
High Fliers Research (UK)	High Fliers reports are available for purchase. They have also released a freely available report entitled, 'The Graduate Market in 2015', available at:	www.highfliers.co.uk/download/2015/graduate_market/GMReport15.pdf
www.highfliers.co.uk/		
QS World University Rankings	Universities can be ranked by 'employer reputation'. This QS ranking include "surveys of employers, graduate employment rates and career service support" (QS Rankings 2015)	www.topuniversities.com/
Graduate destination surveys		
Australian Graduate Destinations Survey	"The Australian Graduate Survey (AGS) is the national census of newly qualified higher education graduates. Conducted annually since 1972, the AGS surveys new graduates from all Australian universities, and a number of higher education institutes and colleges, approximately four months after they complete the requirements for their awards."	www.graduatecareers.com.au/research/surveys/australiangraduatesurvey/
Destination of Leavers from Higher Education (DLHE) (UK)	"The Destinations of Leavers from Higher Education (DLHE) survey asks leavers from [UK] higher education what they are doing six months after graduation. About three quarters of leavers complete the survey."	www.hesa.ac.uk/stats-dlhe
Graduate Employment Survey (Singapore)	"The Graduate Employment Survey (GES) is jointly conducted by NTU, NUS and SMU annually to survey the employment conditions of graduates as at 1 Nov, about six months after their final examinations."	www.moe.gov.sg/education/post-secondary/files/ges-ntu.pdf
Tracking Learners' and Graduates' Progression Paths (TRACKIT), Europe	This report by the European University Association (EUA) hopes to "contribute to raising awareness of the importance of tracking by launching a European debate on this important topic and also – through the examples of good practice and the guidelines it provides – by supporting institutions in developing or further enhancing their own institutional tracking approaches." In so doing, it discusses graduate destination surveys in 31 countries via country factsheets.	www.eua.be/Libraries/Publications_homepage_list/EUA_Trackit_web.sflb.ashx

Measurements and metrics of student employability		
Name	**Information**	**Link**
UK Graduate Careers Survey (High Fliers)	This UK-based graduate survey is based upon "face-to-face interviews with finalists and on-campus research groups with student job hunters. Each survey provides a unique insight into the career expectations and aspirations of final year students – just weeks before they leave university – and provides a definitive record of their search for a graduate job."	www.highfliers.co.uk/
Quality assurance agencies and professional bodies		
The Australian Association of Graduate Employers (AAGE)	The AAGE "is the peak industry body representing organisations that recruit and develop Australian graduates. Our current membership comprises over 350 organisations, including a variety of large and small employers across a wide range of industries in both the private and public sectors."	www.aage.com.au/
The Association of Graduate Careers Advisory Services (AGCAS) (UK)	AGCAS "The Association of Graduate Careers Advisory Services (AGCAS) is the professional body for careers and employability professionals working with higher education students and graduates and prospective entrants to higher education."	www.agcas.org.uk/pages/about-us
The Association of Graduate Recruiters (AGR)	"The Association of Graduate Recruiters (AGR) is an employer-led membership organisation, whose goal it is to ensure that all our members can recruit and develop the best student talent for their needs and the needs of the UK economy." It includes a "network of over 700 members."	www.agr.org.uk/About
Asean Quality Assurance Network (AQAN), Southeast Asia	AQAN's aims are: "To promote and share good practices of quality assurance in higher education in the Southeast Asia region; to collaborate on capacity building of quality assurance in higher education in the region; to share information on higher education and facilitate mutual recognition of qualifications throughout the region; and to develop a regional quality assurance framework for Southeast Asia."	www.mqa.gov.my/aqan/aboutus_mission.cfm

Measurements and metrics of student employability		
Name	**Information**	**Link**
CACEE	CACEE is an "association that fosters the essential networking partnership between Canadian educational institutions and employers." CACEE's membership has grown "with members representing almost every Canadian university, many colleges, and employers across Canada. CACEE continues to be a growing association. It consistently provides its members with valuable networking opportunities, professional development and education to employers and career service professionals across Canada."	www.cacee.com/history.html
Canadian Association for Co-operative Education (CAFCE) (Canada)	CAFCE "is the voice for post-secondary Co-operative Education in Canada and its mission is to foster and advance post-secondary Co-operative Education in Canada. CAFCE members from 79 postsecondary institutions [approximately 80,000 co-op students enrolled] across the country have worked in partnership since 1973 to develop resources to promote the highest quality of post-secondary Co-operative Education Programs."	www.cafce.ca/about-us.html
Career Service Network Germany (CSND)	The CSND is concerned with developing professional career service standards, and acts as an "interface" for those interesting in facilitating a "transition" from HE to the workplace.	www.csnd.de/
Employability skills, graduate careers and international internships (EMPLOI)	"EMPLOI aims to be the leading European network of higher education professionals dealing with employability skills, careers guidance and international internships. In the current context of increasing globalisation in education and industry, EMPLOI aims to support institutions in preparing their students to succeed in the global labour market."	www.eaie.org/home/about-EAIE/expert-communities/overview/emploi.html
Graduate Careers Australia (GCA)	GCA "is the leading authority on graduate employment issues in Australia," producing "a range of graduate-related publications and research that informs students, employers and careers practitioners about industry and salary trends, graduate employment opportunities and career development."	www.graduatecareers.com.au/
European Quality Assurance Register for Higher Education (EQAR)	"EQAR's mission is to further the development of the European Higher Education Area by increasing the transparency of quality assurance, and thus enhancing trust and confidence in European higher education."	www.eqar.eu/register/search.html

Measurements and metrics of student employability		
Name	**Information**	**Link**
Higher Education Academy (HEA) (UK)	The HEA "is the national body for enhancing learning and teaching in higher education (HE). We are committed to excellent learning and teaching, supporting UK HE organisations with an emphasis on improving the student experience."	www.heacademy.ac.uk/about
Higher Education Careers Services Unit (HECSU) (UK)	"Established in 1972, the Higher Education Careers Services Unit (HECSU) is an independent research charity specialising in higher education and graduate employment." HESCU seeks to "support careers advisory services as they guide students and graduates through university and into the labour market".	www.hecsu.ac.uk/about.htm
The International Centre for Career Development (ICCDPP)	The International Centre for Career Development and Public Policy (ICCDPP), established in 2004, seeks to promote and improve "policies and systems for career development services in the fields of education, training, employment and social inclusion" in collaboration with, and for, "policy makers, researchers and career development professionals".	http://iccdpp.org/about/
The International Network for Quality Assurance Agencies in Higher Education (INQAAHE)	INQAAHE "is a world-wide association of over 200 organisations active in the theory and practice of quality assurance in higher education...INQAAHE offers members many services, including a journal, a bulletin, a query service, a good practice database, and a professional qualification in QA."	www.inqaahe.org/
Higher Education Funding Council for Wales (HEFCW)	"We use resources from the Welsh Government and others to secure higher education (HE) learning and research of the highest quality, make the most of the contribution of HE to Wales's culture, society and economy and ensure high quality, accredited teacher training."	www.hefcw.ac.uk/home/home.aspx
National Association of Colleges and Employers (NACE)	NACE (2015) encompasses a network of "more than 6,300 college career services professionals at nearly 2,000 colleges and universities nationwide", as well as "more than 2,700 university relations and recruiting professionals, and the business affiliates that serve this community."	www.naceweb.org/

Measurements and metrics of student employability		
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National Association of Graduate Careers Advisory Services (NAGCAS) (Australia)	"NAGCAS is Australia's peak professional body for career development in the higher and tertiary education sectors." NAGCAS' "core areas of expertise are: career development learning for life; graduate employability; work integrated and cooperative learning; university and employer engagement; and career development education and policy."	www.nagcas.org.au/
The New Zealand Association of Graduate Employers Incorporated (NZAGE)	"The NZAGE is the industry body educating, and supporting organisations that currently or wish to recruit or develop New Zealand graduates. The NZAGE is supported by a broad range of organisations, including large and small employers across many industries in both the private and public sectors. The NZAGE also seeks to consult with related associations including careers advisory services; non profit bodies and entities which offer services in connection with graduate recruitment and development."	www.nzage.co.nz/
Quality Assurance Agency for Higher Education (QAA) (UK)	The QAA is "the independent body entrusted with monitoring and advising on standards and quality in UK higher education."	www.qaa.ac.uk/about-us
The South African Qualifications Authority (SAQA)	SAQA "is a body of 12 members appointed by the Minister of Higher Education and Training".	www.saqa.org.za/show.php?id=5658
(SEAAGE)	"Founded and based in Singapore, SEAAGE is a not-for-profit organisation led by a panel of graduate employment specialists. We represent both recruiters and those with a role in developing undergraduates, graduates and MBAs. As an independent organisation run by graduate employers for graduate employers in South East Asia, we encourage information sharing across a broad range of industries."	http://www.seaage.org/about-us
Advancing cooperative and work-integrated education (WACE)	"WACE is the only international professional organization dedicated to developing, expanding, branding and advocating for cooperative & work-integrated education programs within industry and educational institutions. Cooperative & Work-Integrated Education (CWIE) is a term created by WACE to acknowledge and embrace all forms of experiential learning utilized by industry and educational institutions to prepare the next generation of global professionals. CWIE is an encompassing term that includes: cooperative education, internships, semester in industry, international co-op exchanges, study abroad, research, clinical rotations, service learning and community service."	www.waceinc.org/

Measurements and metrics of student employability		
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Awards programmes		
The Association of Graduate Careers Advisory Services (AGCAS) Awards For Excellence	The "AGCAS Awards for Excellence encourage, reward and share good practice amongst HE careers and employability practitioners, and their partner organisations, by promoting high-quality, creative, innovative and collaborative projects and high professional standards across the full range of HE careers and employability work."	www.agcas.org.uk/pages/agcas-awards
AGR Graduate Development Awards	The annual AGR awards welcome "entries from all AGR recruiting members to showcase best practice across the entire sector." They describe their awards as those "designed to raise standards; truly independent; judged by students and fellow professionals; transparent and open; free to enter; [and] recognised by the sector."	www.agr.org.uk/Graduate-Recruitment-Awards
Guardian University Awards	"The Guardian university awards showcase best practice, achievement and innovation across a range of categories." A category of interest to employability practitioners is the "employability initiative", which is awarded to "to a successful initiative within the university and/or in partnership with industry that equips students with the skills they need for the job market, provides networking opportunities and gives them access to potential employers".	www.theguardian.com/higher-education-network/2014/oct/22/-sp-university-awards-2015-categories
National Association of Graduate Careers Advisory Services (NAGCAS) Best Practice Awards	"Each year NAGCAS hosts the "Best Practice Award" which is an opportunity for tertiary careers services to showcase the innovative projects and activities that they have been involved in during the past 12 months...A $1000 prize is awarded to the careers service that is judged to be an outstanding example of best practice based on the selection criteria."	www.nagcas.org.au/index.php/conference-2015/conference-2014/best-practice-awards-2014
NUE awards	The NUE awards "completed its sixth ceremony in 2015, benchmarking success across all stakeholders in the undergraduate employability market." The awards are dubbed "the only Awards in the undergraduate space", and have been "rebranded to the National Undergraduate Employability Awards to ensure they represent the widening pool of work experience opportunities available to students in today's competitive market."	nueawards.co.uk/about.php

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Reimagine Education Awards	"QS Quacquarelli Symonds, in partnership with The Wharton School SEI Center of the University of Pennsylvania joined forces in 2014 to launch the first global competition to identify the most innovative approaches in higher education to enhance learning and student employability."	reimagine-education.com/the-team
Times Higher Education Awards	A notable category in the Times Higher Education awards is the 'outstanding employer engagement initiative'. This award recognises "a strategic and innovative approach to delivering employers' workforce development needs. It is open to institutions in the UK."	www.the-awards.co.uk/the2014/categories

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