Embedding Employer Engagement and Employability into Masters Programmes: Process, Implementation and Evaluation

Joanne Dickinson
Business School,
University of Leeds, UK
j.h.dickinson@leeds.ac.uk

Ruth Binns
Faculty of Biological Sciences,
University of Leeds, UK
ruthkbinns@gmail.com

Aysha Divan*
Faculty of Biological Sciences,
University of Leeds, UK;
adivan@leeds.ac.uk

Abstract

Currently there are limited publications describing employability training and employer engagement in Masters (postgraduate taught) programmes and how these can be utilised to maximise student chances of progressing to the next stage of their careers. The latter is particularly important, given that a key motivation for graduates pursuing a postgraduate qualification is to enhance their employment prospects. In this paper we provide a framework for actively engaging employers in contributing to the design and delivery of Masters training. We outline the challenges posed and the mutual benefits of such partnerships. We also evaluate students’ perception of the value of the activities embedded within the programme and how these may enhance their employment prospects. Activities included; the provision of short work-based (research) placements, teaching delivered by employers and a series of career development activities. Student evaluation at the end of the year (N=46) showed that between 58-87% (depending on activity-type) of students found these opportunities to be of value particularly in

* Corresponding Author

ISSN 1750-8428 (online) www.community.dur.ac.uk/pestlhe.org.uk
© PESTLHE
increasing their awareness of what employers look for in graduates, improving their ability to present themselves in a more professional manner and in improving their awareness of the diversity of careers they could progress onto on completion of their Masters programme. Given that student’s perceive a Masters qualification to be an important step in preparing them for the next stage of their careers, engaging employers in informing the content of the curriculum and skills set required of the pool of graduates they recruit from is of paramount importance.

**Key words:** Employer engagement, employability, Masters, postgraduate taught, curriculum development

### Background and Context

During the last 10 years, the proportion of people studying in Higher Education (HE) in the UK has increased by approximately 27% (for first degree) and by approximately 18% (for postgraduate taught programmes) (Universities UK, 2013). This expansion of HE combined with a downturn in the economy has led to increased competition for graduate level employment. A first degree once considered an important differentiator in the employment market, is now often seen as a ‘basic minimum’ for many jobs (Brooks & Everett, 2009). Consequently, graduates are increasingly engaging in strategies that provide them with a competitive advantage in the employment market including undertaking work placements, participating in extra-curricular activities and pursuing a postgraduate qualification (Morgan, 2012; Brooks & Everett, 2009).

This coincides with continuing concerns from employers around a mismatch between the skills and dispositions a graduate possesses on leaving university with those required by employers. These include subject-specific technical skills and employability skills (Howse, 2014; CBI, 2011a; Archer & Davison, 2008). The latter (also termed attributes, transferable or core skills) are commonly defined as “a set of achievements, skills, understandings and personal attributes, that make graduates more likely to gain employment and be successful in their chosen occupations, which benefits themselves, the workforce, the community and the economy” (Yorke, 2004). Examples include amongst others, problem-solving skills, communication skills, team working skills, commercial awareness, enterprise and self-management capabilities (reviewed in
Tyron, 2013). In recent surveys, employers have reported deficiencies amongst graduates in general work wisdom, that is, commercial awareness, understanding of the market, teamwork and maturity (CBI, 2011a; CIHE, 2010) and relevant work experience (CBI, 2011a). Linked to this is the focus by the UK government on ensuring that graduates leaving university are equipped with the appropriate skills set to meet the needs of the economy (Higher Education Select Committee on Science & Technology, 2012; DBIS, 2008). Again, these include specialist technical skills and general employability skills of the type described above.

As a consequence of these multiple factors, universities have integrated a number of approaches into the formal curriculum to support the development of student employability. These include provision of work placements, optional or compulsory stand-alone modules (also termed units) designed to help students acquire employability skills or embedding activities throughout the whole degree that develop these skills (Pegg, Waldock, Hendy-Isaac & Lawton, 2012; CBI, 2009).

However, publications reporting these approaches typically refer to the integration of learning activities within an undergraduate curriculum and only a very limited number of publications discuss the employability of postgraduate taught (Masters) students (HECSU, 2014; HEFCE, 2013; Kemp, 2009). Of the limited research, there is some evidence indicating that one of the key motivations for graduates pursuing further learning beyond their undergraduate degrees is to enhance their employment prospects. The Higher Education Academy’s 2013 Postgraduate Taught Experience Survey (PTES) of 58,679 students found that the top two reasons cited by students for undertaking a Masters degree were ‘to improve my employment prospects’ (63%) and ‘to progress my career path’ (57.3%) (Leman, Turner & Bennett, 2013). Similarly Brooks & Everett (2009), report that graduates engage in formal learning opportunities postgraduation in order to enhance their specialised skills-set and hence achieve greater preparation for their desired career and to ‘stand out from the crowd’ in a congested graduate labour market.

Dialogue and collaborative partnerships between employer organisations and HEIs is critical in facilitating the development of student employability and improving employment outcomes. For example, Mason, Williams, Cranmer and Guile (2006)
describe a positive association between employer involvement in course design and delivery and the ability of graduates to secure graduate-level employment. In a survey conducted by CBI (2011b), employers reported a variety of ways in which they were working with universities including providing work placements for students (46% of employers surveyed), partnering with Universities for research and innovation (40%), sponsoring students (28%), and participating in degree advisory boards (18%). These partnerships can be beneficial to students by connecting their educational experiences to the workplace and to employers by enabling them to inform the curriculum and the skills set of the graduates they recruit from. These partnerships are particularly important in the case of Masters students given that a major motivation for pursuing a Masters qualification is to enhance employability. In this paper, we describe a case study of embedding employability into a one-year Biological Sciences Masters programme and how employers can actively contribute to postgraduate employability. Specifically, we describe:

- a framework for engaging bioscience employers in the design and delivery of a Masters curriculum;
- a series of initiatives embedded within a one-year Masters programme designed to enhance student employability and;
- the students’ perception of the value of these initiatives and how they may enhance their employment prospects.

Engaging employers in the delivery of a Masters course: process and activities

Our Masters programme is structured so that it combines subject-specific theoretical modules with research training modules and an independent research project. The research training modules incorporate content such as the technologies underpinning molecular biosciences, research planning, scientific communication and bioethics. The independent research project provides an opportunity to apply the research skills in a practical context. Hence, students have the chance to enhance their capabilities in a range of transferable skills, such as communication and team working skills as well as deepen their subject-specific knowledge during the one-year programme. At the start of this study, there were limited opportunities for students to engage with employers during the course of the year. We built in employer engagement within our programmes to i)
increase awareness amongst Masters students of the types of careers they could progress into and ii) to maximise their chances of career progression by providing opportunities they could engage in, above and beyond the standard academic curriculum.

Figure 1 outlines our employer engagement strategy, that is, the process we went through to involve bioscience employers in the design and delivery of our course. We first articulated the different ways in which employers could become involved. These included establishing an Industrial Advisory Board that could provide advice on course content to ensure that our programme incorporated knowledge and skills relevant to a modern bioscience industry, inviting in external lecturers to deliver seminars and workshops, providing short (research) placements in industry and employers offering student prizes. The articulation phase was followed by identifying a list of potential employers to work with, initiating dialogue with them and then co-developing the activities.

Figure 1. Overview of the strategy adopted to engage employers in the design and delivery of the Masters course in Biological Sciences.
Table 1 summarises the activities that were embedded within the programme as a consequence of this work. These included lectures and workshops delivered by external speakers, events at which students could network with employers and opportunities for students to undertake their research project in industry. Combined with these, a set of wider personal development activities were embedded into the curriculum which included career planning workshops and reflection on skills development. To encourage deep engagement with these activities, some were assessed including completion of the CV and personal statement for an advertised post and the skills audit form.

Table 1. Outline of employability activities embedded within a 1-year Masters programme

<table>
<thead>
<tr>
<th>Activity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Career planning workshops</td>
<td>Workshop content included CV writing, applying for a PhD, update on the graduate bioscience employment market, social networking using LinkedIn. Students were asked to complete a CV and a personal statement for an advertised post of the type they may wish to apply for on completion of their Masters and to submit to academic staff for feedback.</td>
</tr>
<tr>
<td>Student reflection on skills development</td>
<td>Students were asked to audit their competency levels in a series of skills, categorised under four themes (communication skills, computer and information literacy, research skills, personal effectiveness and continuing professional development) at the start of the course and again at the end of the course to identify their strengths, weaknesses and potential gaps. From this, an action plan was developed outlining how areas of low strength could be developed.</td>
</tr>
<tr>
<td>Input into course delivery by industry (employer) experts</td>
<td>Employers contributed lectures and workshops on specialist content within modules and provided real-life case studies from their work environment for students to reflect on and work with. Speakers also provided an overview of the structure and employment opportunities within their organisations and a summary of their career path.</td>
</tr>
<tr>
<td>Opportunities to undertake the research project at an employer organisation (project placement)</td>
<td>All projects offered were laboratory-based research projects by bioscience employers in the UK and undertaken at the host (employer) organisation.</td>
</tr>
</tbody>
</table>
Evaluation of the employability activities: students’ perspective

At the end of the academic year, we assessed how useful the students found the initiatives offered to them during the course of the year, using a small-scale mixed-methods approach. A questionnaire, structured into two sections, was administered to 68 students at the end of the academic year. The first section asked for information relating to the students previous educational history (gender and University where their undergraduate degree had been completed), the reason they had opted to pursue a Masters qualification and what they planned to do following the completion of their studies.

The second part of the questionnaire comprised five questions. The first question asked students to score on a Likert scale of 1-4, how useful they found the employability activities (Table 1) in helping them to improve their chances of securing employment and/or a PhD (1= did not attend; 2= not useful; 3= useful and 4= very useful). This was followed by a set of open questions designed to explore in depth the benefits gained (or not) as a consequence of these activities and any additional activities that could be incorporated within the programme to help progress them onto the next stage of their careers. Students were also asked whether they believed that the Masters qualification would improve their chances of securing employment and/or a PhD position and which skills developed during their Masters, in particular, would help achieve this.

Response rate, student career aspirations and motivations for Masters level study

Of the 68 students, 46 completed the questionnaire (response rate of 67.6%) with an equal split in gender (50% males and 50% females) and an approximately equal split between UK/EU and international students. Of the respondents, 36% were aiming to apply for a PhD position on completion of their Masters programme, 32% for a post in Industry and 26% for a research position (either in industry or academia but not directly specified). The remaining 6% reported various other roles (e.g. medicine, sales, and non-science posts) and these have been combined and categorised as “other” in Figure 2. The reasons cited by students for undertaking the Masters programme were
primarily to gain additional subject-specific knowledge (45%) followed closely by gaining technical skills and experience (40%). 35% of respondents wanted to improve general job prospects and career progression and 15% listed progression to a PhD specifically (Figure 3).

**Figure 2.** Career aspirations of the Masters students registered on the programme.

**Figure 3.** Reasons supplied by the students for undertaking a Masters degree.
Students were asked **How useful did students find the ‘employability’ opportunities?** On completion of the Masters, we asked students to score how useful they perceived each employability activity (Table 1) would be in helping them secure employment or further study. Scoring was on a scale of 1 to 4 (scores of 3 and 4 being useful and very useful respectively). The data is presented in Figure 4. The opportunity to complete and gain feedback on a CV and personal statement written for an advertised job or PhD position was scored the most useful (87% of the student group). This was followed by seminars delivered by the external speakers (81%), completion of the reflective skills audit forms (63%) and then the LinkedIn session (58%). Students were also specifically asked what benefit they had gained from their interactions with employers if any. Figure 5 shows their qualitative responses which have been categorised thematically and quantified. The vast majority of the comments were very positive (86%) with the student group reporting that these sessions had i) improved their awareness of what employers required in graduates, ii) improved their ability to present themselves in a more professional manner and iii) increased their awareness of the diversity of careers they could progress onto on completion of the Masters programme. A very small minority, however, reported that they did not find the sessions useful. A reason cited was the lack of clarity in speakers explaining how to enter their companies at the initial stages of their careers.

**Figure 4.** Percentage of students scoring each activity as “useful” or “very useful” (shown as a combined score).
The qualitative responses provided by students have been categorised thematically and then quantified.

Research project (placement) in industry

All our Masters students undertake an 80-credit laboratory-based research project (a total 180 credits comprise the full programme). This project is undertaken in University research laboratories. We offered students the opportunity to undertake this project in Industry within bioscience employer organisations. We secured six UK-based industry projects that would provide appropriate Masters level, discipline-specific training and which could be realistically completed within the project time-frame (5 months). Supervision arrangements were clearly negotiated to include an identified primary supervisor at the host organisation and a second co-supervisor at the University. Recruitment to these projects were on a competitive basis with students submitting a CV and personal statement and undertaking a face-to-face, telephone or Skype interview with the host organisation. Unfortunately, the uptake of external projects by students was very low with only two students applying for the external projects. Both were recruited successfully to them. The experiences of the students who completed external projects were extremely positive and their thoughts are narrated below.

"The placement at [organisation X] provides me with the opportunity to collaborate extensively with groups from other Universities, European Molecular Biology Laboratory (EMBL) institutes as
Embedding Employer Engagement and Employability into Masters Programmes: Process, Implementation and Evaluation

well as with industry. It also provides experience of working in research and industry and consequently will allow me to develop skills and knowledge relevant to my future career. My placement at [X] has given me great experience in the working of a commercial lab, and also working 9-5.

The key reasons supplied by students for not taking up projects in industry are presented in Figure 6. The most cited were organisational and financial reasons with nearly 40% of the student group who completed the questionnaire indicating this. Exemplar comments were: “Because of my having to get new accommodation outside of Leeds” and “Because it required me to pay for accommodation”. Other reasons included, students simply not being interested in the projects on offer or a lack of confidence in moving away from the University environment. These comments applied equally to UK/EU and International students.

Figure 6. Reasons provided by students for not taking up the offer of undertaking research projects in employer organisations.

The qualitative responses provided by students have been categorised thematically and then quantified.

Students were asked, Has the Masters programme overall improved your chances of securing employment or progressing to further study (e.g. PhD)? At the end of the course we asked students if they believed their Masters training would improve, overall, their chances of securing employment or further study. 82.6% responded in the
affirmative. The remaining students either did not answer this question (13.2%) or were unsure or did not believe that the Masters would improve their career prospects (4.2%). To understand more deeply how the Masters maybe useful, we also asked students which skills developed during their Masters would help improve progression to the next stage of their careers. Reasons reported were, an increased confidence in their communication and practical skill capabilities and a general improvement in their self-awareness (e.g. able to identify personal strengths and weaknesses).

**Reflections**

By the end of our two-year project, we had established working partnerships with over sixty employers from small to medium sized companies through to large multinational organisations across the UK. These partnerships involved i) employers in an advisory capacity to review and advise on skills strengths and deficits ii) visiting speakers delivering specialist talks and contributing real-life case studies to bridge the gap between theory and practice; and iii) employers contributing to work-skills development by offering research project placement opportunities in their organisations. Our data indicates that students were receptive to these opportunities and found them to be of value particularly in increasing their awareness of the diversity of roles they could progress onto, the skills set required to progress into these roles and their ability to present themselves in a more professional manner. These data suggest that students are more “work-ready” at the end of the course than at the start as a consequence of our employability interventions. This is a positive outcome given that work-readiness (general maturity, awareness of the market) is a deficit identified by employers amongst graduates (CIHE, 2010).

In addition, approximately 50% of our students indicated that one of the key reasons for undertaking a Masters qualification was to increase their employment or progression to PhD prospects. Our findings support published data which report that many individuals pursue a Masters qualification to gain a competitive advantage in a congested employment market (Leman et al., 2013; Morgan, 2012; Brooks & Everett, 2009). However, it was interesting to note that a good proportion of students in our study (45%) and in the study conducted by Morgan (2012) (43.3%) were undertaking the degree
Evidence indicates that work placements can contribute to the development of general employability skills required by employers and improve postgraduation employment outcomes (Wilton, 2012; Curtis, 2012; Mason, Williams, Cranmer & Guile, 2006; Little, 2006). It can also boost student’s self-perception of future employability prospects. For example, Qenani, MacDougall and Sexton (2014) report that students are almost 2.5 times more likely to feel highly confident about their
employability if they have gained work experience through an internship during their programme of studies. However, the uptake of projects based in employer organisations by our students was low. The key reason cited for this was the lack of financial support available to the students during the placement period. We experienced two significant issues when organising research projects within employer organisations. One was, not all companies, particularly the smaller ones, were able to provide student living costs whilst they were away from the University and two, some employers were reluctant to offer projects that were of a short duration (e.g. 5 months) due to the time investment required to train the students up, particularly in relation to health and safety in the laboratory. Since then, we have offered student bursaries in cases where host organisations are unable to support the living costs of the students whilst on placement with them to help facilitate uptake of the projects. We are also raising awareness amongst students through discussions with them of the potential for these placements to provide practical work-relevant experience and improve a wide range of transferable skills such as self-confidence, communication and teamwork, and hence improve substantially their employment outcomes.

We found that the key skills that students reported to have acquired as they progressed through their Masters programme were communication skills and practical skills. Practical research training forms a substantial component of our programme and hence the positive development reflects the design of the programme. This is also true of communication skills training and students have previously reported increased confidence in their scientific communication capabilities through the training opportunities embedded within the programme (Divan & Mason, 2015). In addition, students reported an improvement in their self-awareness (e.g. able to identify personal strengths and weaknesses). As part of our employability activities, we embedded the opportunity for students to reflect on their strengths and weaknesses by asking them to audit their skills level at the beginning and end of the academic year. From our data it appears that whilst students scored this self-reflection activity as less useful (63%) compared to other activities such as CV writing (87%), they still developed an awareness of their strengths and weaknesses. We considered self-reflection to be a critical component of their training which enables students to narrate their skills, both subject-specific and transferable, in a way that conveys to the employer that they match the skills required. Embedding self-reflective exercises within an undergraduate curriculum is a well-established practice in some disciplines and can enhance learning,
academic achievement and career planning. The use of self-reflective practices are less well documented in postgraduate taught programmes but recent studies (Baker, Perkins & Comber, 2014; Meredith, 2010) indicate that such activities integrated into the curriculum are likely to be positively received by the majority of Masters students provided that their purpose is made explicit and adequate resources are in place to support the process.

Conclusion

In summary, we have presented a case study of how employability can be embedded within a postgraduate taught (Masters) programme and how employers can be actively involved in shaping the knowledge and skills of postgraduates. We have provided a framework for engaging employers in contributing to Masters level training and summarised the challenges that can be faced in establishing and maintaining partnerships. We have also summarised the benefits to students in involving employers in course design and delivery. This work is of importance as there are limited publications describing employability training and employer engagement in Masters programmes and how these can be utilised to maximise student chances of progressing to the next stage of their careers. Progressing on from this work, it would be useful to track the progression of Masters students on completion of their programme to see how their Masters level learning experiences have helped them transit into and progress through work or further study.

Funding

This work received funding from the University of Leeds Academic Development Fund.

References


Embedding Employer Engagement and Employability into Masters Programmes: Process, Implementation and Evaluation


