

Making the Most of Masters Final Report

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on behalf of the Making the Most of Masters Team
January 2015

Making the Most of Masters (MMM) ran from January 2011 to July 2014 supported through £778,860 of Learning to Work 2 funding from the Scottish Funding Council (SFC). Having met or exceeded all of the objectives set when the project began in 2011, the MMM model of credit-bearing Work Based Projects as an alternative to a traditional Masters dissertation is now firmly embedded within the three partner Universities (Aberdeen, Edinburgh and Stirling).

Key project outcomes and outputs include:

- A thorough understanding of the impact, process and support needed to develop Work Based Projects (WBP) as an alternative to traditional Masters dissertations. This includes the roles, responsibilities and support needed for students, academic supervisors, Masters programmes and employers or other external WBP hosts.
- Appropriate models for assessment, integration with University Quality Assurance requirements and approaches to the promotion of WBPs have been explored and documented.
- A comprehensive MMM resource pack has been developed and was launched at an open dissemination event in June 2014. These resources are free to use and available from the Making the Most of Masters website (<http://www.mastersprojects.ac.uk/>). 12 Scottish institutions (excluding the partners) have requested and been provided with copies of the resource pack.
- More than 700 masters students have undertaken dissertation WBP placements with a wide range of businesses and other organisations during 2011 to 2014 (exceeding the project target of 300 over three years).
- An economic impact study of MMM estimated its total value to the Scottish economy of between £3.75M and £6.2M for academic years 2011/12 and 2012/13.
- MMM has stimulated a range of other employability and employer engagement activities across the three partners. This has included identification of new undergraduate employer placements, support for work based projects within the coursework elements of Masters programmes and the adaptation of MMM resources and materials for the EaSTBio Doctoral Training Partnership PiPS scheme.
- MMM WBPs are firmly embedded within the three partner institutions and are operating on a sustainable footing based upon institutional investment beyond the end of the SFC funded period. Conservative estimates are that a minimum of 300 MMM style WBPs will be completed by students each year across the three partners from AY14/15 onwards.
- Discussions are ongoing with the SFC around the potential for additional funding to support the extension of the MMM model to other Scottish institutions and to build on the legacy of the MMM project and partnership.
- MMM was winner of the 2013 Times Higher Award for Outstanding Employer Engagement.

LTW2 funding has allowed the MMM team to gain a deep understanding of the benefits and practicalities of offering Work Based Projects as an alternative to traditional Masters dissertations. In the process we have seen a positive step-change in the number of dissertation Work Based Projects and have documented a wide range of positive benefits for students, employers and Universities. Our hope is that we will be able to build on this productive partnership with the SFC to extend this approach to more institutions, employers and programmes.

Background and Project Objectives

Making the Most of Masters (MMM) was funded as part of the Scottish Funding Council (SFC) Learning to Work 2 (LTW2) scheme. MMM is a curriculum development project intended to design, pilot and roll out an integrated set of resources, tools and methodologies to embed the use of external Work Based Projects (WBPs) as an alternative to the traditional academic Masters dissertation. We aimed to achieve this objective by facilitating and supporting at least 300 placement projects over the duration of the project. The key objective for MMM was to develop a mature package of support that could be embedded and sustained within the partner Universities and be suitable for use elsewhere in Scotland.

Funding over three full academic years (from early 2011 to July 2014) allowed us to work across the three partner Universities (Aberdeen, Edinburgh and Stirling) and with other organisations (including Research Pools) to engage with a broad range of employers, masters programmes and students. Our mid project report submitted in autumn 2012¹ described the overall structure and management of the MMM project, provided an interim report against project objectives and outlined our plans to the end of the funded project. The project has moved through four distinct phases:

- January – August 2011: project initiation (project design, staff recruitment, exploration of contexts and specifications)
- September 2011 – August 2012: development and pilot (small scale pilots to test and develop the MMM WBP model and associated resources)
- September 2012 – August 2013: roll out (refining MMM resources and model, extension to more programmes and employers, evaluation of impact)
- September 2013 – July 2014: embedding (exploration of models to embed and sustain the MMM model, and a focus on dissemination and evaluation of economic impacts)

The MMM project had originally been scheduled to run until the end of December 2013. SFC support to vire some funding into calendar year 2014 allowed us to fully explore models for sustainability and so embed MMM within the three partner institutions from the end of academic year 2013/14 onwards.

This report provides an update on progress since autumn 2012 and summarises the key outcomes and outputs of the MMM project.

Project Outputs and Outcomes

The MMM project team have met or exceeded all of the objectives set when the project began in 2011. The key project outputs and outcomes can be summarised as follows:

Work Based Projects Sourced and Completed

Whilst our primary focus in sourcing WBPs and supporting students to complete them was to better understand the resources and support needed to maximise the positive benefits of Masters dissertation WBPs, the number sourced and completed is an important project output.

The numbers of WBPs sourced and completed during each year of the project and for each partner are summarised in Table 1 and Figures 1 & 2. The targets agreed in 2011 were to have 60-80 WBPs in Academic Year (AY) 11/12 and 220-240 during AY12/13, giving a total of 300 WBP by the end of the project. We comfortably exceeded these targets with 120 WBPs completed (and 246 sourced) in AY 11/12 and 284 WBPs completed (and 437 sourced) in AY 12/13. By the end of LTW2 funding a total of 738 WBPs had been completed and 1,239 sourced.

¹ Making the Most of Masters – Mid-project Report (2012)

	AY10/11	AY11/12	AY12/13	AY13/14
Edinburgh	0 (0)	87 (108)	162 (242)	199 (337)
Aberdeen	6 (16)	33 (97)	85 (149)	69 (121)
Stirling	0 (0)	0 (41)	37 (46)	60 (82)
Total	6 (16)	120 (246)	284 (437)	328 (540)

Table 1 Number of WBPs completed (and sourced)

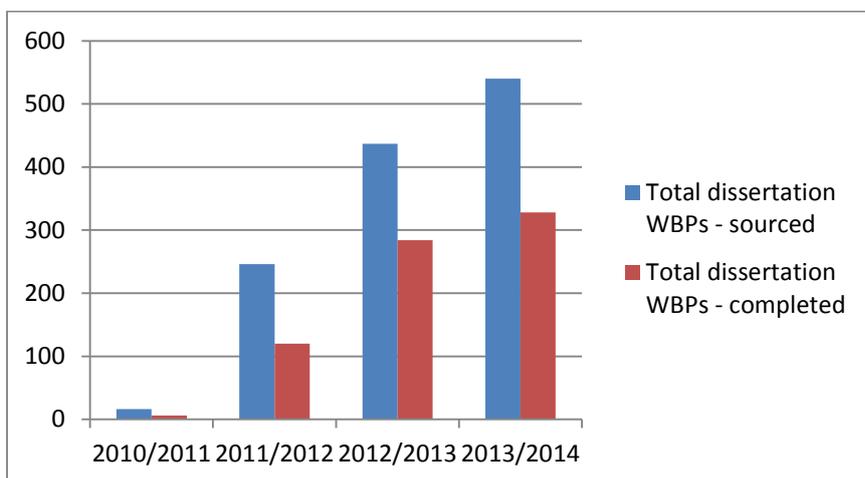


Figure 1 Dissertation Work Based Projects Sourced and Completed across the three partners

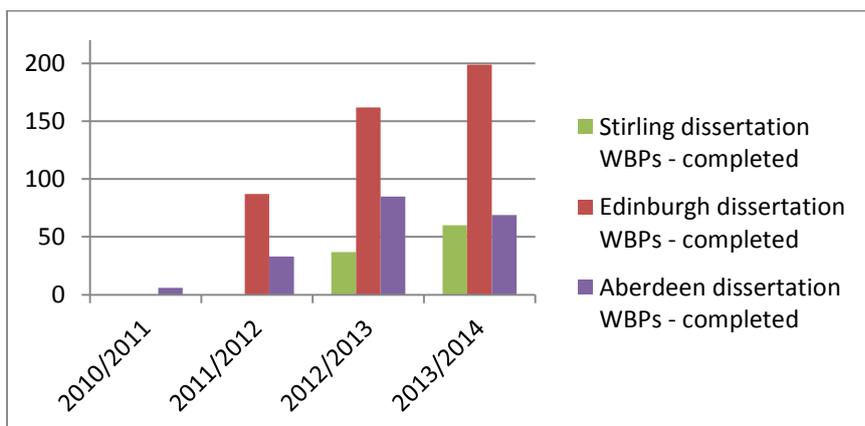


Figure 2 Dissertation Work Based Projects Completed in each of the three partners

Looking ahead to AY14/15 and beyond the three partners expect to support a minimum of 300 MMM style WBPs per year.

Based upon Student Experience Surveys (e.g. Postgraduate Taught Experience Survey, International Student Barometer), discussions with students and staff we expected to see a very strong demand for WBPs from students. As we designed and developed the MMM model during 2011 and 2012 we confirmed our understanding of the challenges involved in establishing WBPs at Masters level, both for employers and academics. In addition to the demands of bringing suitable employers, masters programmes and students together, the key difference between the MMM model and more familiar types of work placement is that an MMM WBP must generate outputs appropriate for assessment as a level 11 Masters dissertation. It also requires a significant time commitment to agree WBP specifications in advance and provide supervision during the WBP period.

We were therefore surprised to find that the number of WBPs we were able to generate from employers exceeded the demand from students. Part of this reflects misfits between employer generated WBPs, the Masters programmes involved and student interests, although this was ameliorated by sharing WBPs between the partners and highlighting opportunities to adapt WBPs to other placement schemes. More significant was a degree of risk aversion amongst some students who were put off by what they considered to be a novel (and hence risky) alternative to the more familiar academic style dissertation. The vast majority of students who have completed an MMM WBP have highlighted the significant educational and employability benefits it brings. We have encountered no significant or disproportionate problems with students completing or gaining high marks for WBP dissertations. As we gather case studies of the positive impact of WBPs and the approach becomes more familiar and embedded in practice locally we expect to see demand further increase so that a higher proportion of available WBPs will be taken and completed.

Flexible and Comprehensive WBP Resources

By supporting more than 700 students from more than 150 different Masters programmes, and in scoping WBPs with more than 700 employers from all disciplines and sectors we have developed a deep and thorough understanding of the WBP process. In developing a model and associated support for the design, development, support and evaluation of MMM WBPs it became clear that a one size fits all approach is not suitable. Instead, what Masters programmes, academic supervisors and employers or other WBP hosts need is a framework of support for Masters level WBPs that can be adjusted and tailored to the requirements of specific contexts and disciplines.

This framework is described in Figure 3 alongside links to the resources developed for each stage of the process. These resources align with Quality Assurance Agency Codes of Practice, University Regulations and other guidance, and can be adapted and tailored to fit local circumstances. Further information on how MMM resources are used and adapted is provided in Appendix 1.

In line with the overall objectives of LTW2 all of the resources and materials developed for MMM are available and free to use for all Universities and employers in Scotland and beyond. Information on the resource pack and a sample of its content is available on the Making the Most of Masters website (<http://www.mastersprojects.ac.uk>). The resource pack can then be provided in either printed or electronic format (included a limited number of MMM USB drives). The MMM resource pack was launched at a sector wide dissemination event in Stirling in June 2014 (with Paul McKelvie as a keynote speaker). The MMM team have also promoted the resource pack and shared learning from the project at a range of events (including the Scottish Enhancement Themes Conferences and Higher Education Academy events) over the last three years. Since June 2014, MMM Resource Packs have been requested by staff from at least 12 Scottish Universities (15 if the current partners are included), 10 non-University institutions in Scotland and a further 12 Universities in England and Northern Ireland.

Impact

The effectiveness of the MMM model and associated resources was discussed in the 2012 mid-project report. Its positive impact on students, employers and masters programmes has been documented through a series of case studies (e.g. Appendix 2) and was evaluated through SFC commissioned work² that reviewed the results of interviews and analysis of MMM survey results. These benefits, for students, employers and Universities, are effectively described in a video produced by Stirling University (<http://www.stir.ac.uk/mmm/>), whilst several Masters programmes within the partner institutions now emphasise the availability of dissertation WBP in their advertising and student recruitment.

² Rocket Science UK Ltd with Blake Stevenson Ltd, report for SFC January 2014

Key Stages of a Typical Work Based Project (WBP) and Resources Available Through Making the Most of Masters

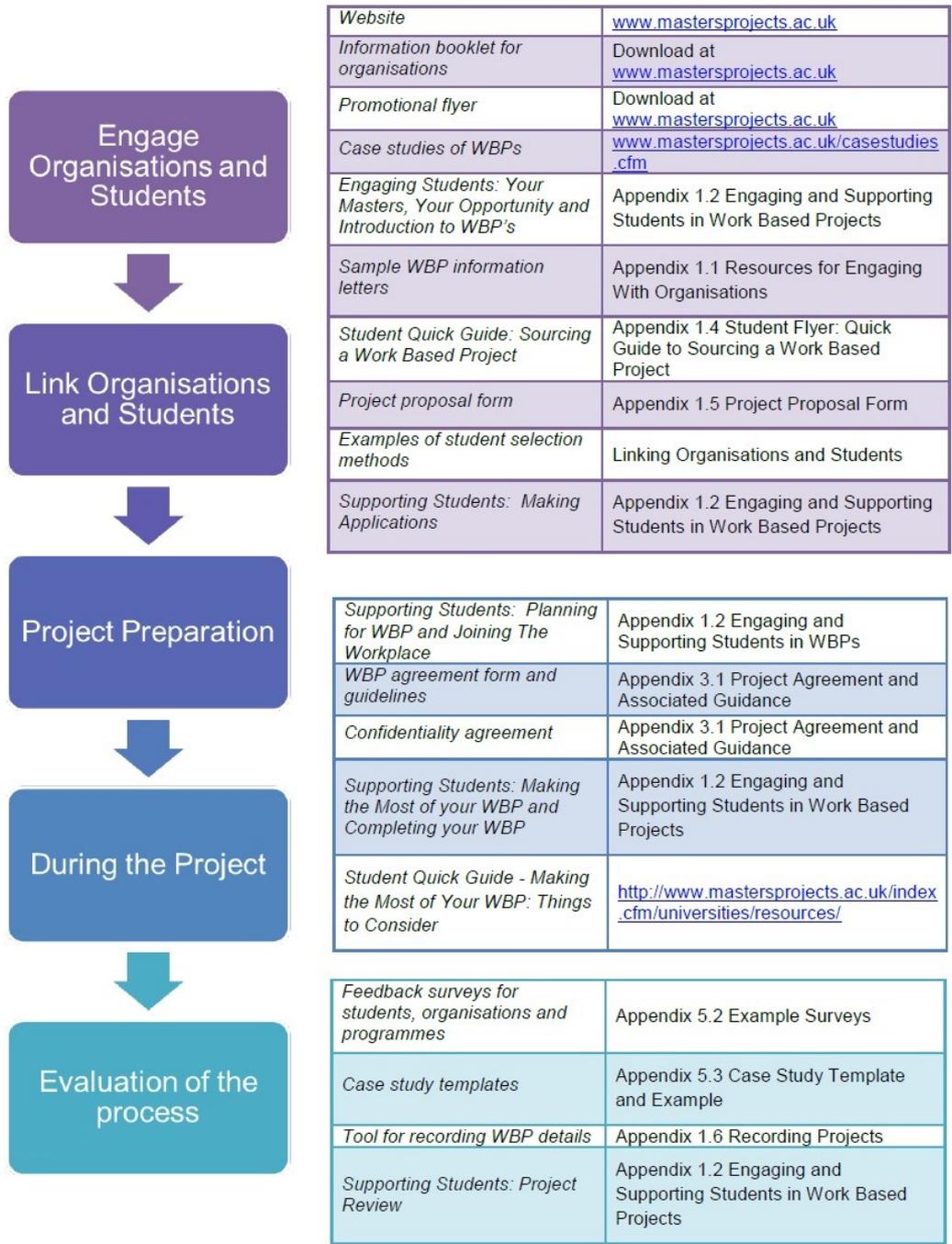


Figure 3 MMM Framework and Associated Resources

The impact and potential for MMM in supporting University employer engagement was further recognised by the award of the 2013 Times Higher Award for Outstanding Employer Engagement, by the actions taken by partner Universities to embed MMM support in future plans and in the interest in the potential of implementing the MMM model shown by other institutions across Scotland and beyond.

Partly inspired by the positive reaction from employers we commissioned an economic impact study of MMM from BiGGAR Economics in early 2014³. This study identified and quantified a range of specific economic impacts around the employability and earnings of students, impact on turnover and staff recruitment savings for employers, knowledge exchange and business/University links, and student recruitment to Masters programmes. For academic years 2011/12 and 2012/13 this total economic impact was estimated at between £3.75M and £6.2M. The range and value of the economic benefits to employers helps to explain the positive reaction we have seen and provides a key opportunity for the future growth and development of the MMM model to many more employers and programmes within and beyond the current partner institutions.

An additional benefit of the MMM project has been the emergence and impact of an MMM community of practice around Masters level employer engagement. This community of practice has helped to maximise engagement opportunities for employers by providing opportunities to share WBPs between partners and by helping employers to access other placement schemes or opportunities to make connections with academic programmes and students. It has prompted the adaptation and use of the MMM WBP model for other areas of the curriculum. This has included the use of WBPs within the course work element of Masters programmes, its modification and development for the EaST Bio PIPS project⁴ (where PhD students from the BBSRC funded Doctoral Training Programme undertake internships outside academia as a compulsory part of their PhD). Members of the MMM network have also supported new employability training within Masters programmes and other employer engagement activities (e.g. employer networking events and participation by Edinburgh in a Higher Education Academy staff placements pilot project).

Sustainability and Embedding

A key objective for MMM was to understand the long term costs and benefits of Masters dissertation WBPs and to explore and understand a range of options for embedding this provision on a sustainable basis within the partner institutions.

It is clear that Masters level dissertation WBPs will never be an easy or cheap option for Universities or employers. Whilst the availability of the flexible MMM model and resources for supporting WBPs provide a valuable and secure basis for introducing this approach, each new student and supervisor (University or employer) requires significant guidance and support, and considerable effort is needed to continually refresh the range of employers willing to offer WBP. There are significant workload implications, in adapting course content, project supervision and assessment arrangements, when a Masters Programme offers WBP dissertations for the first time.

By the start of academic year 2013/14 all three partners were clear in their view that the value of the MMM dissertation WBP approach justified these costs and were actively exploring different models for sustaining MMM support beyond the end of SFC LTW2 funding. By allowing us to vire funding to the end of AY13/14 SFC provided an opportunity for all three partners to complete this work and build support for MMM style WBPs into their financial and staffing plans. This has secured a legacy for the MMM project in these three partners beyond the LTW2 funded period. Our conservative estimate is that a minimum of 300 MMM style WBPs will be completed each year by students across the three partners in AY14/15 and beyond.

One general lesson for the sector and other institutions when considering the adoption of the MMM model is the importance of taking time (at least 2 academic years) to understand and evaluate the costs (staff time, opportunity and financial) and benefits (curricular, student experience and

³ "Economic Impact of Making the Most of Masters", A final report to the Institute for Academic Development, University of Edinburgh, BiGGAR Economics, 30th July 2014

⁴ <http://www.eastscotbiodtp.ac.uk/professional-internships-phd-students-pips>

employability, Knowledge Exchange and employer engagement). Only then can institutions judge the net value of the MMM approach and how best to build it into their institutional plans and structures.

Each of the MMM partners has taken a slightly different approach to embedding MMM support. In Aberdeen ongoing central support for MMM WBPs is being provided through a dedicated post within the Careers Service. Their role includes working with staff associated with specific academic departments and Schools where there is a strong focus on WBPs and supporting some students to source their own WBPs. It also provides strong links between other aspects of employer engagement, placement and employability support for students led by the Careers Service. In Edinburgh, rather than a dedicated MMM post at the centre of the University, the different elements of MMM support (employer engagement, curriculum development advice, guidance and training for students and staff) have been integrated with the mainstream support of the Careers Service (Employer Engagement Team) and Institute for Academic Development (Taught Masters Team). Within Edinburgh, Schools and Programmes where a major focus on MMM style WBPs has developed (e.g. Business School, Social & Political Sciences, GeoSciences, Biology) have built responsibility for Masters dissertation WBPs into the job descriptions of new or existing staff. A key focus of the work of the Institute for Academic Development in this area is to support this growing community of practice, working with them to share practice, refine central support and informally mentor those introducing Masters dissertation WBPs for the first time. In Stirling, where take up of the MMM model was initially strongest in the School of Natural Sciences a joint appointment has been made between the School and the Careers & Employability Service. This will allow the experience of embedding MMM within an academic area to be combined with careers and employability expertise as the MMM approach is extended to other areas of the University.

Whilst the specific approach to embedding has varied between the three partners what they have in common is the combination of involvement of central University services (careers and academic development) with focussed, local (discipline-level) capacity and engagement. Another important factor in the success of MMM has been engagement and encouragement from University senior management, particular Vice Principals for Learning & Teaching (and equivalent). Their engagement was key, not least to confirm to colleagues that the MMM approach can play a key role in supporting institutional aspirations and strategic priorities in learning and teaching and student experience. They have also helped in ensuring that Quality Assurance issues were dealt with appropriately and that Masters dissertation WBPs were reflected in institutional planning discussions (e.g. Outcome Agreements).

One final issue worthy of consideration is the approach taken to build the three cornered partnership that sits at the centre of each MMM WBP, between the student, the Masters programme and the employer. In principle this partnership could be initiated and led by the programme, student or employer. In practice the majority of MMM WBPs undertaken have been initiated at programme level. An MSc programme director has expressed an interest in encouraging some students to undertake a dissertation WBP. Then, through combination of local contacts and central University (MMM) support, employers have been approached so that one or more projects can be offered to students. One disadvantage of this approach is that it can leave some projects unallocated (not taken up by students). One advantage is that the WBP approach has been fully endorsed and built into the ethos of the masters programme. An alternative approach, and one that has been taken on some occasions, particularly in Aberdeen, has been to support students in identifying and setting up a suitable external WBP host with the agreement and backing of their programme director. The advantage for students is that they can tailor the project and employer to their personal priorities. The extra risk is that programmes and employers may not be as aware of the particular assessment, support and learning requirements of a Masters level dissertation WBP.

MMM resources, and particularly the process map outlined in Figure 3, have proved themselves to be flexible and robust enough to support both of these models. Looking further ahead, and particularly to the SFC MMM legacy funding proposal described below, it would be interesting to test the MMM resources and model with an employer-led approach to building this partnership.

Looking to the Future

LTW2 funding has allowed the MMM partners (Aberdeen, Edinburgh and Stirling) to understand and develop appropriate support and guidance to embed MMM style WBP dissertations in a growing number of their Masters programmes.

Both the SFC and the original MMM partners are now keen to see the legacy of LTW2 funding fully exploited and its reach extended to new Universities and businesses across Scotland. Whilst access to the MMM resource pack provides institutions with a useful start, the challenges involved in establishing and embedding WBPs at Masters level are considerable, for employers and Universities. Each MMM WBP is unique and there is a significant cost to institutions (in staff time) in setting up and supporting each WBP. Institutions need time and support to understand the costs and benefits of the MMM WBP approach and to explore options for its embedding at a programme and institutional level.

Discussions are underway to secure SFC funding to establish an MMM Hub through a half time coordinator post at Stirling University. The MMM Hub will create and coordinate a network that will provide practical support and advice to new partners as they build capacity locally to trial and test the MMM model for themselves, and promote practice sharing and innovation in employer engagement and curriculum development across the MMM partnership and sector as a whole. This will extend the geographic reach of MMM to the whole of Scotland, reaching many new employers and organisations. Our hope is that this will include opportunities to test an employer-led approach to building WBP partnerships and to extend the benefits of MMM employer engagement to other areas of the Masters curriculum.

Appendix 1 – Introducing the MMM Work Based Project Toolkit (poster from Scottish Enhancement Themes Conference 2013)



A Toolkit for Work Based Projects – does one size fit all?

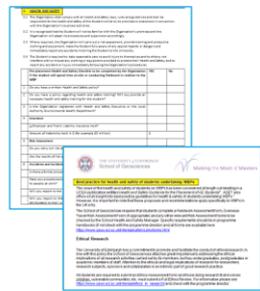
Diane Gill
Wendy Rudland
Neil Lent
Eunice Atkins
Zac Hickman
Caroline Pope

Making the Most of Masters aims to create more opportunities for taught postgraduate students to undertake work based projects (WBPs). As part of this, the team have developed a suite of resources, or a 'toolkit', available to any Scottish HEI wishing to embed this option within their curriculum. For further information see www.mastersprojects.ac.uk

Too General or Too Specific – Finding the Middle Ground
A major challenge was developing resources that are generic enough to suit any masters programme and/or student but not so generic as to be of no use to anybody. For example, the requirements of a company offering a project in a technologically sensitive subject such as Biotechnology are very different to those of a small charity offering an International Development project. Similarly, as taught postgraduate students come from a diverse background, their motivations for choosing to study at masters level differ widely, as does the support they require in order to achieve their aims.



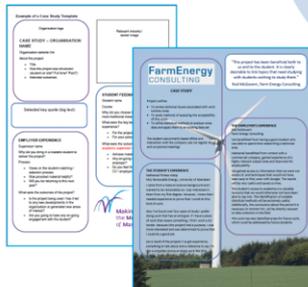
- The Toolkit Includes**
- Guide to WBPs for University Staff
 - Information for Host Organisations
 - Marketing Material
 - Student Support Resources
 - Project Agreement
 - Student Industry Projects (SIP)
 - Feedback Surveys
 - Case Study templates



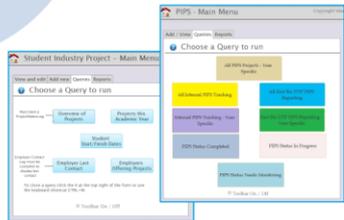
Student support resources can be delivered via a virtual learning environment or workshops. All can be tailored and a 'pick and mix' approach is suggested to ensure the most relevant materials are available to students.

Our Approach: Build a Skeleton
Resources were developed that have a high degree of flexibility through the use of skeleton documents that can be tailored for individual needs. This includes different modes of delivery (e.g. online versus face to face) and a 'pick and mix' approach on content.

Documents can be customised to incorporate your school or programme specific information. For example, here the 'health and safety' section of the Project Agreement form has been replaced by the Schools' own Best Practice information.



Blank templates, such as the case study here, can be customised and populated with your own information



The SIP database, used to keep track of projects and organisations, can be fully customised both in its look and feel and in the queries and reports available. Here additional queries have been added.



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Appendix 2 – Case Studies

- Student, Employer and Academic Programme experiences

<http://www.mastersprojects.ac.uk/casestudies.cfm>

Case Study: Student and Employer Experience FarmEnergy Consulting

Project Outline:

- To review technical issues associated with wind turbine noise
- To study methods of assessing the acceptability of this noise
- To utilise statistical methods to analyse noise data and apply them to an existing data set

The student was primarily based offsite and interaction with the company was via regular email and occasional meetings.

THE EMPLOYER'S EXPERIENCE:

Rod McGovern, Farm Energy Consulting

We benefitted from having a good student who was able to spend time researching a technical area.

Nathaniel benefitted from contact with a commercial company, gained experience of a highly relevant subject area and improved his employability.

We gained access to information that we were not aware of, and techniques that would not have been easy to find, even with Google. The results will be very useful and saved us time.

The student's access to academia is a valuable resource that we would otherwise not have been able to tap into. The identification of suitable statistical methods will be extremely useful. Additionally, the conclusions about the period it is necessary to monitor for, will be directly relevant to data collection in the field.

This work has also identified areas for future work, which could be addressed by future students.

THE STUDENT'S EXPERIENCE:

Nathaniel Forbes Inskip, MSc Renewable Energy, University of Aberdeen

I came from a Natural Science background and I wanted to do renewables as I was interested in them from my first degree. However, I knew that I needed experience to prove that I could do this kind of work.

Also I've found over four years of study I prefer doing work that has an end goal. If I have a piece of work that means something, I find I work a lot harder. Because (the project) had a purpose, I was more interested and was determined to prove that I could do a good job.

(As a result of the project) I've got experience, something to talk about and a reference to say I'm not a complete dunce at doing work like this!

"This project has been beneficial both to us and to the student. It is clearly desirable to link topics that need studying with students wishing to study them."

Rod McGovern, Farm Energy Consulting

Case Study: Student and Employer Experience National Trust for Scotland and MSc Ecology and Environmental Sustainability

Making the Most of Masters sourced a 3 month project from the National Trust for Scotland that was undertaken on a salary free basis by Nicole Pearson, a MSc Ecology & Environmental Sustainability student.

Damselfly habitat and changes to their habitat with woodland management

This project required the student to split their time between the NTS survey sites and University. The project was suggested by Toni Watt, NTS Ranger at Crathes Castle.

THE EMPLOYER'S EXPERIENCE

Toni Watt, National Trust for Scotland, Project supervisor

The student was excellent ...a good communicator, keen and got on with the project. She was and is also very good at keeping us informed of progress and results.

A pleasure to work with.

Nicole produced a report for us to read and also thoughts for the future of the project which will help as we take the overall project further. This has helped us with work we do not have time / resources for ourselves and helping us to plan/adapt the project for the next few years.

THE STUDENT'S EXPERIENCE

Nicole Pearson, MSc Ecology & Environmental Sustainability

I realised I could gain more experience by working with an outside employer. I was allowed free reign to design the project myself but I had to keep in mind that it [also] had to be to the benefit of NTS.

I gained a useful insight into how external organisations work, the type of work I could expect as a graduate, and some excellent employability skills.

Case Study: Student and Employer Experience

Atkins Global and MSc Safety & Reliability Engineering, University of Aberdeen

Reviewing Safety Culture Models and establishing if links could be developed between those Models.

Atkins Global were interested in gaining access to a pool of students with MSc Safety qualifications, contributing to the wider professional development in this field, and improving student employability.

Elizabeth Jacob was 'placed' within the organisation for the project duration, which investigated the following:

- Reviewing how safety culture plays a key role in determining the level of risk that personnel are willing to take in order to complete the task at hand, despite time constraints.
- Reviewing organisational models that help investigate how proposed changes could impact the behaviour of individuals, groups and structures within an organisation.
- Considering the development of one existing tool to support the analysis of different organisations.

THE EMPLOYER'S EXPERIENCE

Andy German, Chief Safety Engineer, Atkins

Elizabeth fitted into the company well and I enjoyed the supervision process. She was extremely capable and demonstrated excellent knowledge and understanding of the project requirements, and excellent overall performance.

The output was extremely useful for us and having a Masters student to undertake this work was a clear benefit to our organisation. We are already looking ahead to developing a greater collaboration with the University of Aberdeen and will again be looking at suggesting masters level work based projects.

Elizabeth now works for us as a Graduate Safety Engineer.

THE STUDENT'S EXPERIENCE

Elizabeth Jacob, MSc Safety & Reliability Engineering, University of Aberdeen

I wanted an industry related project to apply the technical knowledge I had gained from my degree. I gained valuable interpersonal skills, effective communications skills and I also learned that the working environment needs individuals to be constantly inquisitive.

I had the opportunity to converse with professionals from top management to current graduate engineers within Atkins. This not only helped the research needed for my dissertation, it also encouraged me to think further about my career path and the various options available.

At the end of the project, I was pleased to have received a job offer as a Graduate Safety Engineer within Atkins. I would personally encourage any Masters student to complete their dissertation with an industry as it can develop you areas that you don't even know exist!

Elizabeth Jacob, Graduate Safety Engineer, Atkins.

Case Study: Student and Employer Experience

Transform Scotland and MSc Environmental Sustainability, University of Edinburgh

The project:

Research, analyse and compile a written report on whether the Scottish public sector is helping to deliver sustainable transport.

Full use of Transform Scotland's office and software was available if necessary. Weekly meetings were held to keep up to date on progress/discuss issues.

THE EMPLOYER'S EXPERIENCE

Colin Howden, Director, Transform Scotland

Aoife's report was successful in achieving national broadcast media attention (it was one of the main stories on BBC Scotland) and won the attention and support of the Scottish Government's environment minister. We are now actively pursuing more work in this area.

We brought Aoife in for the simple reason that, as a small charity, we needed extra resources to complete the project. However, we also welcome working with the University in order to utilise the academic credentials that it brings.

Setting up the internship was simple, the processes straightforward, and we will certainly be looking to work with the programme again in future years.

THE STUDENT'S EXPERIENCE

Aoife Parker-Hedderman, MSc Environmental Sustainability, The University of Edinburgh

I chose to carry out my dissertation in collaboration with an organisation as I felt it would give more grounding to my research. I believed it would enhance and broaden my perspective on the chosen topic whilst exposing me to various situations that I may find myself in with future employment- and it did.

The key benefits from this experience were:

- gaining an all round understanding of what 'report writing and launching' involves, being the lead author of the resulting publication (see link above);
- meeting and conversing with numerous professionals in the environmental field;
- and experience working in an office environment with a truly inspiring group of people.

I would certainly encourage students to consider such a route, as part of their MSc based on my positive experience."

Case Study: Academic and Student Experience

University of Stirling

The Academic Experience

Dr Nigel Willby, Programme Director of MSc Environmental Management

The Environmental Management MSc at the University of Stirling is widely recognised as an international leader in training environmental managers for work in both the public and private sectors. As such there has been a long tradition of students undertaking work based projects with external organisations. Making the

Most of Masters has now further enhanced the experience for our students, has increased the numbers of students undertaking their dissertations with external organisations and, through publicising work-based dissertations more widely, has had the unanticipated effect of being an added incentive for recruitment to the programme.

The adoption of MMM has resulted in changes to our programme from amendments to the course manual to include some background information, to a more rigorous process of project selection and the use of tripartite project agreements which help keep projects within the limited boundaries of a three month dissertation. This has been a positive change which benefits to all stakeholders. In its first year students were interviewed for work based projects. However, due to time limitations the recruitment process has now been simplified so that students apply concomitantly for both work based and academic-led dissertations by submission of ranked noted interests and CVs. This encourages students to update and refine their CVs and also encourages them to check their social media pages often using the assistance of our Careers Development Centre. In addition to this being beneficial to the student and the external organisation, it is also useful to academic project supervisors who may not necessarily know the backgrounds of students making applications. A poster presentation session has now also been introduced at the end of the academic year for all our students and this gives us an opportunity to invite and thank our project hosts as well as introducing the next year's cohort of students to the dissertation process and the standards expected.

Projects are sourced through academics, the MMM Project Co-ordinator and by students themselves. The provision of MMM documentation in the form of the "How to Guides" has helped inform students about work based projects and helps prevent pitfalls when sourcing their own projects. Most MMM projects have been sourced through a Networking Event where employers and prospective project hosts (approx. thirty representatives attend), relevant to a range of disciplines, were invited to meet our students and staff. This event is typically greeted with some trepidation by our students and it is gratifying to see how, with help in their preparation, students attend as confident young professionals. For many, this is their first opportunity to meet face to face with employers and the event has been widely praised by everyone involved. Projects have been developed with Environment Protection Agencies, major conservation bodies, local authorities and independent environmental consultancies and following their degree our students have a high rate of employment amongst such organisations.

The Student Experience

Katrina Shiells, MSc Environmental Management, now working as an Energy and Sustainability Consultant for Hurleypalmer Flatt

"One of the main reasons for deciding to progress with a masters at the University of Stirling was not only the strong reputation of the course, but also the opportunity to carry out a work based placement with the Making the Most of Masters scheme. This offers vital experience often missing from similar courses, giving graduates a competitive edge and increasing employability."

Thomas Rose, MSc Environmental Management

"I thought that the MMM event was very well organised. It was great to get a chance to speak to representatives from different companies within the Environmental and Sustainability Industry. I enjoyed the fact that we were able to freely browse and chat to the companies that we were interested in. It was also a great opportunity to network with potential employers and contacts which will no doubt help me in my future environmental career."

Kaidi Kuusk, MSc Environmental Management

"It (The Employer Engagement Event) was a great opportunity to meet the employers and find out more about their MMM projects. Even if I wasn't interested in some of the projects, I really enjoyed finding out more about their businesses and even just practicing introducing myself in a semi-professional environment"

Catriona Laird, MSc Environmental Management, now working for Arcus Consultancy Services Ltd.

"I undertook a thesis with Scottish Natural Heritage (SNH) in 2014 which aimed to investigate the impact of deer trampling and browsing on the Flanders Moss National Nature Reserve. I believe that the MMM scheme helps to highlight and develop practical skills that are desired by potential employees as well as gaining vital work experience. My contact at SNH was always willing to provide feedback and logistical support as well as local knowledge of the site. During this project, I was also invited to attend a training day with SNH employees which allowed me to network with a wide range of people and to gain insight into working for this organisation.

Undertaking an MMM project may also make you stand out amongst other candidates. When interviewing for my current position, my employer was very keen to hear about my thesis with SNH and I believe that undertaking this project may have made more employable."

Lois Campbell, MSc Environmental Management. Now working as an Environmental Scientist at AECOM, URS Corporation, Qatar.

"Being involved with an MMM project was a great experience. It gave me the chance to be part of large ongoing project, and contribute to important current scientific research. Through field and laboratory work I was able to use the skills learnt during masters course, I also learnt new skills (such as invertebrate identification) which enhanced my CV."

Case Study:

Work-Based Projects in the School of Social and Political Science, University of Edinburgh

What was done

The School of Social and Political Science (SSPS) offers work-based projects to students studying on the following postgraduate programmes:

- MSc Africa and International Development
- MSc International Development
- MSc Science, Technology and International Development
- MSc South Asia and International Development
- Master of Public Policy (MPP)

Projects typically last between 8-12 weeks, with the majority of students working on location with their host organisation throughout. As well as producing a Masters dissertation, students may also be required to compile a separate report for the organisation.

Activities/example of practice:

The work based project process is broken down into four distinct areas:

- Sourcing projects
- Matching students and preparing for departure
- On location
- Return to Edinburgh and project analysis

Sourcing Projects

Projects are sourced by the Placement Coordinator, often working in conjunction with academic colleagues in relevant areas. Utilising personal contacts is by far the most effective means of developing relationships with external organisations, although some projects were sourced through a mixture of 'cold-calling' and applying to pre-defined internship schemes as advertised by hosts.

The Placement Coordinator works closely with the organisation to tailor each proposed project to meet the aims of both the MSc dissertation and the organisation's own internal research needs. Sustained contact with host organisations enables the university to build and develop strong links with external parties and, in some instances, to secure additional interactions through the form of academic research collaborations and joint-funded PhD studentships.

Matching Students and Preparing for Projects

Projects are advertised on a competitive basis and all applicants must meet the strict academic entry criteria. Final selections are made by Programme Directors, in consultation with the Placement Coordinator, and are based on academic standing, previous experience and future career aspirations. In some cases the host organisation may choose to interview a short-list of possible candidates, and this has been successfully accommodated in previous sessions.

Once the host organisation has approved the student, and the student has accepted the placement, the school facilitates a formal introduction between the two parties. Students are encouraged to develop detailed project outlines and deliverables prior to arriving on location for their research. Skype meetings have proven to be the most popular and successful, enabling students to build a stronger relationship with their host organisation prior to starting their research. Students also meet with their university academic supervisor, to help plan readings and finalise research outlines.

In the weeks leading up to departure, the school runs a number of support sessions for students. Each session is designed to address different practical aspects of the research project:

- Networking, career development and reflective writing (run by a university Careers Officer with input from Making the Most of Masters)
- The practical side of fieldwork (run by school Placement Coordinator with input from Making the Most of Masters)

On Location

While on location the student is supported by three key individuals:

- Placement Coordinator (for non research-specific queries and pastoral support)
- Academic Supervisor (for research design and academic guidance)
- Placement Supervisor (for practical support in the field)

Throughout the work based project, each student must keep, and submit to the above roles on a fortnightly basis, a reflective diary detailing the work undertaken thus far, as well as plans for future research. This written account enables staff to monitor progress and identify (and address) potential problem areas.

Return to Edinburgh and Project Analysis

On arrival back in Edinburgh, each student is asked to submit detailed feedback about their project. This acts as a useful learning tool for the school, highlighting areas of success and aspects which can be improved for future cohorts. The Placement Coordinator also requests detailed feedback from host organisations through Skype/telephone calls and online surveys, as well as beginning the process of securing placements for the next academic session.

This year (academic year 2013/14) the school is looking to run a career development session with a Careers Officer. The session will help students consolidate the skills acquired through their work-based research activities. Similarly, the school also plans to run a careers evening with local organisations, providing a platform to both promote the work-based placement to potential hosts and provide networking opportunities for our upcoming graduates. Students are also asked to submit photographs of their project (for use in future promotional materials) as part of a photography competition, as well as to present a short overview of their project, detailing work undertaken, skills learned and the potential impact the work-based placement will have on future career development.

Motivation and Aims

During the 2011/12 academic session, 5 SSPS Masters programmes piloted a new dissertation research scheme known as the Work-Based Placement. Academic staff worked closely with colleagues in the Making the Most of Masters project (see www.mastersprojects.ac.uk for more information) to source and administer projects for 40 students (35 MSc and 5 MPP). The projects were very successful and feedback from both students and host organisations was incredibly positive. SSPS recognised the value of work-based learning and approved the creation of a dedicated Placement Coordinator role with responsibility for sourcing, supporting and managing the entire placement process.

Alumni from the pilot year are now employed in a range of roles with internationally recognised organisations including Amnesty International, Teach First and Chatham House.

Successes and Lessons learnt

Constructive student support is a vital part of the work based project process. Seemingly small problems can escalate quickly when students are in unfamiliar surrounding without easy access to support. Excellent planning and well-conceived support mechanisms can mean the difference between the success and failure of a project. The school has overcome these issues by ensuring that students are as prepared as possible before departing Edinburgh and that all staff involved in the placement process have clearly defined roles and guidelines for interaction with students.

SSPS maintains close links with Making the Most of Masters and we benefit greatly from the expertise and guidance they offer. The university as a whole is now starting to adopt work-based learning on a wider scale and MMM plays a central role in bringing together colleagues from across the institution to discuss best-practice, share expertise and exchange contacts.

Scalability and Transferability

The SSPS work based project scheme is now in its second year and going from strength to strength. In year 1 we offered 40 projects. By year 2 this number had grown to 120 available projects located worldwide across 4 continents. In future years additional MSc programmes will join the placement scheme, extending the availability of projects to a wider cohort of students.

SSPS maintains contact with work based project alumni and takes an active interest in their career development and future plans. As our alumni begin to establish themselves within their chosen fields of interest, we actively encourage them to consider offering placements to current cohorts. This has led to a number of high-profile and successful projects, including two students who partnered with the Grameen Foundation in 2012 to conduct research into mobile money transfers in Uganda.

We are also in discussion with other schools from across the university with reference to the possible introduction of multi-disciplinary projects spanning more than one subject area. These new group projects will enable students from different programmes to partner together and examine a project topic from multiple research angles. In particular SSPS and the Business School are currently in discussions regarding the introduction of a number of such projects in the 2013/14 academic session

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