Managing projects practitioner development – a successful university-industry partnership

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Abstract

This paper describes the development of an innovative, project management, practitioner development program Managing Projects (MP) resulting from a successful partnership between BP p.l.c., one of the world’s largest energy companies, and the University of Manchester (UoM). The target audience for the MP program comprises experienced, mid-career project managers who have been trained in, and have experience of applying the procedures and techniques of project management. The program, therefore, takes these procedures and techniques as a starting point and focuses on the “why and how” of managing projects within BP and explores concepts of leadership and judgement in project contexts. In this paper, we outline the development of the program design, based around a practical implementation of reflective practice and blended learning, and a successful university-industry partnership. The highly dispersed learning community, the heavy existing workload on the delegates, and the necessity for delegates to remain engaged with their work assignments suggested a distance-learning approach. However, the development needs of reflective practitioners and the broader BP desire for strengthening the project and engineering management community within BP stressed the importance of face-to-face teaching. We therefore chose to combine classroom-based teaching with a virtual learning environment (VLE). The reflective practice paper used in the MP program adopts an experiential learning approach and a dynamic learning framework to help structure the reflection process around the delegate’s current role and responsibilities, including their professional experience to date.
Introduction

In this paper a successful partnership between the UoM and BP p.l.c. (BP) to design, develop, and deliver a managing projects practitioner development program is described. The program aims to develop what Schön (1983) has described as “reflective practitioners” who emphasize reflection-in-action rather than technical rationality in their professional practice. The program, therefore, moves beyond traditional project management training courses that seek to develop project managers as trained technicians following predefined methodologies supported by a well-honed toolbox of techniques to execute well-defined projects. The paper will first place the program in the context of both BP’s corporate needs at the start of the 21st century, and the UoM’s long tradition in teaching and research in the management of projects. Subsequent sections explain the design, content, and delivery of the program, and indicate how the potential barriers to a successful outcome were overcome. Finally, evaluation of the program is considered and conclusions are drawn.

The Context of The Program

BP is one of the largest global players in oil and gas, vying with Shell for second place behind Exxon Mobil in the sector. The modern BP is the result of a series of successful strategic initiatives by BP in the late 1990s, which led to a merger with the United States (US)-based Amoco (1998) and acquisitions of ARCO (2000), the United Kingdom (UK)-based Castrol (2000), and the German-based Aral (2002). BP had fully owned Sohio since 1989. This financially led deal-making culture remains pervasive in BP, which values the entrepreneurial spirit of its business unit leaders. In 2009, the company celebrated its 100th anniversary, dating its formation from the successful finding of oil in what is now Iran. The corporation is headquartered in London, with two main centers of gravity in terms of project activity – Sunbury, England (near Heathrow airport) and Houston, Texas. The 2008 turnover was $90 billion and capital expenditure $22 billion. The corporation is divided into two main segments Exploration and Production (E&P – “upstream”) and Refining and Marketing (R&M – “downstream”), complemented by interests in alternative energy.

Entering the 21st century, BP was a major player, but with limited commonality in its processes and procedures due to its multiple heritages. The global oil market was also changing – most oil reserves are now owned by national oil companies and so joint venturing with those companies is crucial to gaining access to new reserves. Those reserves not owned by national oil companies usually present extremely challenging environments such as the Gulf of Mexico (very deep water), Alaska (extreme cold) and Canada (heavy oils). The competitive advantage of an oil major is now dependent on the technologies it
can deploy as well as its financial muscle – and the effective management of projects is vital to the successful deployment of those technologies.

The development of project and engineering management capability within BP is structured in three tiers. The first two tiers come under the auspices of the Projects and Engineering College (the ‘College’). The first tier is Projects and Engineering: The BP Way. This consists of a two-week program held in Houston delivered on behalf of BP by ESI, the leading supplier of project management training. It focuses on the “what” of projects within BP with a syllabus that covers the provisions of the various processes and procedures within BP for managing projects and engineering contained in the suite of documents called the Major Projects Common Process (MPcp - E&P) or the Projects Common Process (R&M). The syllabus broadly covers the type of material that would be found in one of the project management Bodies of Knowledge, although in significantly greater depth. Upon completion of this program, delegates know what should be done when managing BP projects. The College also provides a number of stand-alone modules that cover specialist topics such as risk management. Graduates from this program are then eligible for nomination by their business onto the MP program, which is the subject of this paper, or the Engineering Management program, which is also delivered by the University of Manchester. The third tier is the Projects and Engineering Academy delivered on behalf of BP by Massachusetts Institute of Technology (MIT) in Boston, which focuses much more upon the challenges of leading major projects. Graduates of this program are known within BP as Major Project Leaders (MPL).

The tradition of teaching and research at the UoM, formed in 2004, and its legacy institutions (UMIST and the Victoria University of Manchester- VUM) in the field is long, and can be usefully reviewed as an intertwined stream of four sets of concerns for project strategy, project organization, commercial management, and the practice of projects. The earlier work focused on the challenges of larger scale engineering projects, and is well represented by the contributions to Smith (1995), and the identification of key issues by Barnes and Wearne (1993). The return of Peter Morris to UMIST reinvigorated this tradition and reinforced the UMIST critique of the narrow, execution-oriented approach that dominated teaching and research in project management at the time and stressed the importance of the more strategically orientated “management of projects” perspective (Morris, 1994), and projects as value-creating processes (Winch, 2002). Alongside these developments, other work at UMIST was developing a distinctive perspective on inter-firm relations on projects conceptualised as “commercial management” (Lowe, 2006), an area often ignored in mainstream project management teaching and research (Winch, 2005).

This concern for new ways of thinking about the project process was the motivation for the successful UMIST application for EPSRC network funds to support the Rethinking Project Management initiative,
led by Mark Winter. This took an explicitly soft-systems approach in contrast to the hard-systems thinking associated with the mainstream project management tradition, and used an action-research methodology to enhance the dialogue between the academics and practitioners who participated in the network (Winter, Smith, Morris, & Cicmil, 2006). Many of the debates within the network explicitly addressed pedagogical issues (e.g., Crawford, Morris, Thomas, & Winter, 2006; Morris, Crawford, Hodgson, Shepherd, & Thomas, 2006) and articulated a strong desire for the development of reflective practice. The network also provided a forum for engagement between those coming from a “management of projects” perspective with another intellectual tradition with strong UMIST roots – critical theory – which had been nurtured within the “making projects critical” conference series (Hodgson & Cicmil, 2006), which emphasised the need for deeper understanding of the lived experience of projects. Again, this perspective has a distinctive pedagogical approach, and is strongly critical of the narrowness of the body-of-knowledge emphasis of traditional project management pedagogy (Cicmil & Hodgson, 2006).

Within VUM, a distinctive approach to postgraduate management education was developed, which focused more on experiential rather than analytic learning. Influenced by the ideas of Revans (e.g., 1982) and Kolb (e.g., 1984), what became known as the Manchester Method (Rickards, Hyde & Papamichail, 2005) emphasised group work and enquiry-based learning to address real management problems and reflected a more general trend in executive programs (Roglio and Light 2009). Action learning is question based rather than answer based and takes place when real work problems are tackled by the managers themselves and uses

“…real consultancy assignments for small groups of students as a central part of its teaching method. Project work of this kind helps students extend and reinforce their knowledge by learning from one another and by analysing a relevant and contemporary issue and also gives intensive experience of team working” (Cockerill, 1994, p. 30).

Within the project management domain, this line of enquiry has resulted in research on creativity in project teams (Rickard and Moger, 2000). Academics working within all of the traditions described above have contributed to the development of the MP program.

**Program Development**

In early 2007, BP and UoM entered into a partnership to develop and deliver an education program for experienced middle-ranking project managers positioned between the BP Way and the Academy at MIT. It was clear, therefore, that the MP education program would go beyond the syllabus of the ‘bodies of knowledge’ approach to practitioner development exemplified by the Project Management Institute’s
Managing projects practitioner development – a successful university-industry partnership

Project Management Professional® (PMP®) certification (PMI, 2009). The target audience comprises experienced, mid-career project managers who have already been trained in, and have experience of applying the procedures and techniques of project management. Participants in the MP program are expected to know the BP Way before they come on the MP program, which focuses on the “why and how” of managing projects within BP and introduces concepts of leadership and judgement to the delegates. The overriding objective is to develop an understanding of why and how projects within BP can be most effectively managed on the basis of a prior understanding of what procedures ought to be followed.

The projects being managed by our delegates range in value from tens of millions of US dollars to billions of US dollars, located around the world in often inhospitable and remote locations. They include greenfield (no previous construction) as well as brownfield (previously used) sites and many involve new technologies, complex contracting relationships and intricate stakeholder relationships. Projects are located in the upstream businesses and downstream businesses as well as the functions, including information systems. Along with many other organizations (Crawford et al, 2006), BP recognizes that many experienced practitioners are nearing retirement age. This impending loss of experienced staff and associated tacit knowledge, coming at the same time as increasingly challenging projects, has given urgency to the need to develop new project managers and to pass on the tacit knowledge accumulated during 30 or more years of experience.

The demographic gap has been exacerbated by a trend prevalent in both the oil and gas sector and other major projects sectors toward the outsourcing of projects and engineering capability. This is described as the “sine wave” by one of the contributors to the program1 in which corporate decide that projects and engineering are not their core business and therefore outsource their capability until the lack of capability leads to worsening performance on projects and they then move toward insourcing that capability. Recovery from this position can be difficult and not without organizational pain.

A typical delegate for the program is a highly experienced project manager or engineering manager with at least 10 years of experience, already holding a key position and with the potential to progress further. The target project managers therefore know how to manage projects in terms of life cycles, procedures, and techniques – the emphasis in MP is upon the soft skills that allow the hard skills to be effectively deployed. This program, therefore, is not about teaching the basics of project management, it is about educating for leadership, judgement, and the application of the principles and processes in situations of complexity and ambiguity.

1 Bernard Kelly, Professor of Nuclear Decommissioning, School of Mechanical Aerospace and Civil Engineering.
The development of the program drew broadly on the full range of the UoM intellectual context described above, complemented by the earlier experience of developing practice-based Master of Science MSc programs in project management within the UoM (Alam, Gale, Brown, and Kidd, 2008). Before design of the program could commence, however, there were many practical issues and constraints to consider; the key ones are shown in Table 1.

Table 1. Issues/constraints on the design of the program.

<table>
<thead>
<tr>
<th>Issue/constraint</th>
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<tr>
<td>1. The target audience (the delegates) are in senior project management positions working in high pressure roles at the heart of mission critical projects for BP. They cannot be taken away from their roles for extended periods of time to attend education events.</td>
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<td>2. The delegates are based in locations around the world, including: UK, USA, Canada, Norway, Germany, Egypt, Angola, Indonesia, Alaska, Russia, Trinidad &amp; Tobago, Australia, Belgium, Singapore, United Arab Emirates, South Korea, Azerbaijan, Columbia, Pakistan, Algeria, China, France.</td>
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<tr>
<td>3. Few delegates will have participated in university-based education since graduating – typically 20 years ago.</td>
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<td>4. The program is required to offer the possibility of a formal University qualification; therefore some form of summative assessment is required</td>
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<td>5. Ideally the program will have accreditation from one or more professional bodies.</td>
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These constraints mandated a “blended learning” approach, mixing both distance-learning and classroom learning. The highly dispersed learning community and the necessity for delegates to remain engaged with their work assignments suggested a distance-learning approach, which is used in BP for some technical courses. However, the development needs of reflective practitioners and the broader BP desire for strengthening the project and engineering management community within BP stressed the importance of face-to-face teaching as is done on the BP Way program. We therefore chose to combine classroom-based teaching with a VLE implemented using the Blackboard Academic Suite Vista Enterprise system from Blackboard Inc. of Washington, DC, to provide a rich, Web-enabled blended learning environment, that also facilitated high levels of face-to-face interaction.

Although VLE have become widely used in graduate business school programs such as Manchester Business School’s Global MBA program, they not yet been used very often for executive education programs. The challenge was how to combine the reach of the VLE with the interaction required for the development of reflective practitioners to achieve a blended learning solution that met the development aspirations of BP and the pedagogical aspirations of the UoM.

BP came to the program design process with a large and detailed list of learning objectives, which are summarized in the Managing Projects Executive Summary as follows:
MP focuses on the application of the project management processes and principles collectively known as The BPway for Projects, which are described in other Projects & Engineering Management College (P&EMC) courses and programs.

MP is geared to increase our capability to consistently deliver successful capital projects across BP. It is for all who manage projects in BP. The MP educational experience is focused on the management of small- to medium-sized projects as well as managing teams within more complex, major projects. MP also provides insights to support success in challenging multi-regional business environments.

Program development was undertaken by a joint team of UoM academics and BP MPLs working at two levels: program architecture and session content. For program architecture, the team included the Programme Director and Deputy Director from the University and the Program Director and those MPLs from BP charged with designing the overall architecture of the program. These MPLs had experience of developing the BP Way and had all attended the MIT program. A number of UoM faculty also attended the BP Way program during this phase of development. Program architecture in this context includes the mapping of learning objectives to units and subject areas, the pedagogic approaches to be applied, formative and summative assessment, themes and issues of program integration, and an agreed structure for program delivery.

Once the high level architecture was agreed, a number of subject matter experts (SMEs) from both the University and BP were appointed to work jointly developing the detailed, subject area content. A series of ‘away day’ workshops (dubbed SME Fests) were held during a period of eight months with all SMEs and the program directorate participating. These workshops led to an agreed program architecture, specific subject area learning objectives and content, an assessment approach, and a design of a pilot program. Relevant Independent Project Analysis (IPA) benchmarking data were made available to all of the SME attendees and program directorate for consideration when designing course content. On completion of the pilot program, a thorough review led to some changes to program content, although not to the overall architecture. A consequence and benefit of the SME Fest approach, and joint working between BP and faculty, was a demonstrable, joint ownership of the course structure and content. At least two SMEs from BP were allocated to each topic area and these worked alongside counterparts from the faculty in developing the individual topic areas. This very close, integrated BP and faculty team working was a key factor in the successful design of the MP program. The dedication of senior management time to MP was a clear, and very important, demonstration of the commitment from BP to the program.

In order to take account of the heavy workload of the target audience (the delegates) it was agreed that a maximum of two weeks away from the work place would be acceptable and that, as far as possible,
learning would continue actually in the workplace as part of the delegate’s job rather than in addition to it. The learning-on-the-job elements do require time, however, and it was decided that the overall program would require around 12 months to complete. The effectiveness of this approach is supported by the experiential learning literature described above and also by the experience gained in applying the Manchester Method to MBA teaching over many years. This approach also ensures that learning takes account of the practice of managing projects within the BP context and not just theoretical constructs from academia.

It was also clear from any early stage that the program should not attempt to follow any project lifecycle. BP has a clearly defined and rigorously applied stage-gate lifecycle called the Capital Value Process (CVP) but developing reflective practitioners requires a perspective that goes beyond lifecycle structures and considers, for example, leadership as an element of project management across all stages of the lifecycle. It was agreed that the early parts of the program would focus more on the strategic aspects of program definition and then move toward execution issues as the program progresses. Otherwise, the program is not bound by the chronology of any project lifecycle.

The program specification was developed with the aim of delivering learning outcomes that fit in with the standards at Masters level for Business and Management that are identified and described within the Framework for Higher Education Qualifications by the Quality Assurance Agency for Higher Education (QAA) in the United Kingdom (QAA, 2008). Specifically, the program was structured and accredited as a postgraduate certificate in managing projects from the UoM, requiring 60 credits in total. All BP delegates are registered as postgraduate students at the University for the duration of the program.

The high level MP program objectives are defined in the Programme Handbook as:

1. To increase BP’s capability consistently to deliver successful capital projects across all segments.
2. To provide students with insights into successfully establishing and managing projects and contracts in multi-regional, cross-cultural business environments.
3. To enable students to understand how to identify and apply different project strategies and respond appropriately in order to deliver real capital value.
4. To enable students to develop appropriate leadership approaches in differing project environments.
5. To enable students to define appropriate governance structures, recognising the importance of Health, Safety, Security and Environment (HSSE), Quality, Engineering Systems Integration and Stakeholders.

6. Build and strengthen an active and effective BP projects expert practitioner community.

7. To contribute to the professional development of delegates and prepare them for potential further study at Masters level.

The program is structured as a 12-month program with some pre-work, two residential weeks separated by an intersession period of approximately five months, and followed by a post session period, also of approximately five months as shown in Figure 1.

Delegates are expected to have a recognized first degree or professional equivalent, have at least 5 years’ project experience, and will probably have completed a number of BP’s distance learning courses on managing projects. Unit 1, Project Principles, is the BP Way program, that earns 15 credits, and the MP program itself provides 45 credits (and therefore 450 PMI® Professional Development Units). Approximately two months before the first residential week, delegates are contacted with details of the pre-work. This includes:
1. A short course on the BP Economic Evaluation Model (EEM) that is the basis for BP financial decision making and provides a foundation on which elements of the program are built.

2. A detailed case study especially developed for the program by Tom McNatt and Nuno Gil2 and used across a number of sessions.


4. Pre-reading from the literature for several of the course sessions, typically Harvard Business Review articles.

All of the pre-work is accessed via the VLE.

The program gets into full swing with the first of two intensive residential weeks (Sunday evening through to Friday afternoon, including evening activities) and ends with an intersession set up. The intersession period of approximately five months includes distance learning (an online course on Quality Management), and pre-reading in preparation for the second residential week as well as work on the reflective practice papers. Again, pre-reading for the second week is drawn from sources such as Harvard Business Review, but now complemented by readings from the program set text (Morris & Pinto, 2004), that includes chapters by contributors to the program (Kidd, Lowe, Winch) as well as valuable contributions on topics such as project strategy, project classification, and project leadership. The second residential week has an identical architecture to the first, ending with a post session set-up. The post session period, also of approximately five months, includes further work on the reflective practice papers and concludes with the submission of those papers through the VLE for assessment following standard university procedures. The final event in the program is a graduation ceremony in Second Life (a three-dimensional (3D) virtual world developed by Linden Lab) held annually, which usually groups a number of cohorts.

The content of the MP program content is structured as three units, each worth 15 credits, complemented by the 15 credits from the BP way course delivered by ESI in Houston (Unit 1 of the UoM Certificate). Delegates are given a test consisting of 25 multiple choice questions from a bank of 70 questions with a pass mark of 70% on the Project Principles unit prior to acceptance on the MP program.

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2 Tom McNatt, Practice Dynamics; Nuno Gil, Manchester Business School.
The three units, and their main topics, delivered by the UoM are:

Unit 2 – Creating a Distinctive Project
- Project strategy
- Contracts and procurement
- Project value

Unit 3 – World Class Execution
- Project execution
- Project performance, benchmarking & knowledge management
- Engineering and systems integration

Unit 4 – Project Leadership
- Project leadership
- International collaboration and negotiations
- Project organization and team working

The units and subjects are spread across the two residential weeks as shown in Table 2 with each entry in the table representing a half-day ‘session.’ There are also session-related evening activities that are not shown in the table. While the MP program is divided into three units each containing three subjects, these boundaries are highly and deliberately permeable. Managing complex projects requires actions and judgments that do not fit neatly into process or technique areas and the program is designed to reflect this complexity. There are many common themes and linkages established between the sessions, some common teaching case material is used throughout the program, and frequently delegate input is built upon throughout the sessions.
Table 2. Spread of subjects across the two residential weeks

<table>
<thead>
<tr>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
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<tbody>
<tr>
<td><strong>Residential week A</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project Strategy 1</td>
<td>Project Strategy 2</td>
<td>Engineering &amp; Systems Integration 1</td>
<td>Contracts &amp; Procurement 2</td>
<td>Project Leadership 1</td>
</tr>
<tr>
<td>Project Value</td>
<td>Project Organization 1</td>
<td>Contracts &amp; Procurement 1</td>
<td>Project Performance</td>
<td>Inter-session setup &amp; guest speaker</td>
</tr>
<tr>
<td><strong>Residential week B</strong></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Engineering &amp; Systems Integration 2</td>
<td>Project Execution 2</td>
<td>Project Value 2</td>
<td>International Collaboration &amp; Negotiations 2</td>
<td>Project Leadership 2</td>
</tr>
<tr>
<td>Project Execution 1</td>
<td>Benchmarking &amp; Knowledge Management</td>
<td>International Collaboration &amp; Negotiations 1</td>
<td>Project Organization 2</td>
<td>Post-session setup and guest speaker</td>
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</tbody>
</table>

Each session in the program is led by a University academic and each has an ‘alternate’ faculty member who covers the session in an emergency (sickness, etc). There is also one or more BP SMEs and one or more additional faculty present in each session. Their role varies across sessions. For example, in some sessions the BP SMEs are asked to assist syndicate groups and provide an experienced ‘grey beard’ view on syndicate presentations. In other sessions, the BP SMEs may contribute when discussions become very BP-specific, or to stimulate thinking and discussion. BP SMEs and UoM faculty are also available to add differing perspectives when prompted by the session presenter or in response to delegate questions.

Presenting senior managers with endless lecture style material is neither acceptable nor effective, and is avoided in the program. It is also not appropriate for University academics to be telling experienced delegates that ‘this is how it is!’ On the other hand, it is important to stimulate discussion, facilitate the sharing of experiences, and to provoke contrasting approaches. The program addresses this by combining a variety of pedagogic approaches including: case-based teaching, discussions, experience sharing, group work and individual activity, reflective practice, research, distance learning, reading, literature reviews, work-based application, and peer support.
Reflective practice\textsuperscript{3}

Experiential learning is a central feature of the program. It facilitates the integration of concepts, theories, and practice introduced during the formal sessions, and through distance-learning, into the delegate’s working practices, and provides a mechanism for developing the delegate’s competence in real-life work situations. Research shows that experienced practitioners can make significant advances in developing their knowledge and capabilities through processes of reflective practice and experiential learning, and this is in line with the increasing emphasis on facilitating reflective learning in higher education (see for example Reynolds, 1998; Roglio & Light, 2009).

Traditional forms of assessment are not always appropriate for busy managers on part-time programs and the opportunity for practitioners to reflect on their own experience is highly relevant to professional development programs where the emphasis is more on preparing people for the realities of real-world practice than on academic research. The reflective practice paper used in the MP program uses a dynamic learning framework to help structure the reflection process around delegates’ current roles and responsibilities, including their professional experience to date (see Figure 2). An introduction to appropriate concepts is used as the source of questions for reflecting on the delegate’s own approach, resulting in various insights and actions that he or she might implement in the future. The selection of relevant literature and concepts by the delegate is a crucial part of the process, but whatever concepts are chosen, they should always be specific to the delegate’s role, thus enabling the learning process to be delegate-driven and directly centred on the delegate’s particular interests and concerns. In summary, the whole process is about enriching delegates’ current knowledge and experience through structured reflection and clearly connecting the codified knowledge discussed in the classroom and the tacit knowledge of the subject area.

\textsuperscript{3} Susan Moger, Maria-christina Stafylarakis and Mark Winter all contributed to the thinking behind the development of the reflective practice papers.
In recognizing that for many delegates essay writing generally, and reflective practice in particular, are not part of their everyday work experience, the reflective practice assignments are structured to help the delegates into and through the process. Each reflective practice paper is broken down into five elements:

A. **Delegate in Work Role**: The delegate is posed structured questions about his or her current work role, and previous experience as appropriate. Delegates are helped to focus by being asked to use Covey’s (1989) “circle of influence/circle of concern” framework, which forms part of the teaching on project leadership. They are reminded to stay within their circle of influence, but also encouraged to think how they might extend it within their circle of concern.

B. **Unit Concepts and Principles**: The delegate researches more deeply and increases understanding of program concepts appropriate to his/her current and future work role. They are
also encouraged to search more widely in the John Rylands University Library (accessed through the VLE) for ideas.

C. **Reflective Assessment: Ideas and Insights:** This is about linking theory to practice and is therefore the core of the reflective practice paper where the delegate is asked to connect the first and second stages to generate new insights into how the role can be performed more effectively, thereby providing an intellectual bridge between the workplace and the classroom.

D. **Key Learning Points and Actions:** This section summarizes the learning through the reflective practice process and identifies potential routes for implementation, thereby encouraging a process of incremental change in the practice of managing projects within BP.

E. **Critical Reflection:** Here the delegate critically reviews the process of preparing the reflective practice experience and how it has developed his or her capability as a manager with the aim of identifying what he or she would do differently in the future. Some of the comments from delegates from this section are reported elsewhere in this paper.

The process of formative assessment of the papers is carefully planned. The sessions shown in Table 2 are grouped into three course units as shown in Figure 3, and delegates are asked to produce a reflective practice paper in each of those three units. Delegates are asked to submit drafts of parts A and B for each of their three reflective practice assignments mid-way through the intersession period. They then receive two kinds of feedback on these drafts prior to attendance at week B. First, the academic unit coordinator provides feedback through the VLE on the more academic aspects of the paper in terms of the development of the argument, connection with course concepts, and focus of the piece. Second, they receive feedback by email from retired BP MPLs, who in effect provide coaching on how to handle the situation within BP in terms of improving their effectiveness in managing projects. Additional feedback on common themes from these drafts is provided in groups during the second residential week, shown as a Café Session in Figure 1. SMEs are also available during the second week for informal tutorials on demand.

Parts C and D are then completed in the first half of the post-session period, and submitted as drafts for comment together with the revised parts A and B. These again receive formative feedback as described above. At the end of the post-session period, the final and complete reflective practice papers (parts A to E inclusive) are submitted for formal assessment by the UoM. Formal UoM examination procedures are applied with the papers being marked anonymously, a percentage second marked, and a percentage cross-checked (all three papers from individual candidates) for self-plagiarism. An external examiner also reviews a percentage of papers and a formal exam board meets before the results are
finalized. The final papers are not seen by BP and only pass/fail results are reported back to BP. No individual marks are passed to BP by the UoM.

The reflective practice approach is seen by BP as the “…jewel of the programme” (BP MP Program Director, 2009), building as it does consultative and practical learning and development improvements, and driving delegate confidence in his or her capability. Such is its importance for BP that active participation in the reflective practice assignments is now part of the selection criteria used for further leadership training.

Delegates have reported significant benefit from the reflective practice assignments. For example, one delegate stated:

“In my professional and personal life I routinely reflect and adjust course. My reflections have typically been reactive following either good or bad events and/or outcomes. This assignment has made it clear to me that reflection can be more effectively used in a pre-emptive manner as part of the planning effort. In the simplest of actions this essentially amounts to applying prior lessons learned at the appropriate time. Another key personal learning in completing this assignment is the value of written reflection vs. a mental-only process. The written reflection is much more disciplined. Collecting, organizing, and putting my thoughts into words added tremendous value for me. I suspect my experience may be typical based on a limited number of conversations with other students. I also need to transfer this experience and knowledge to my direct reports.” (Anonymous delegate, MP Program, 2009).

Another delegate felt that:

“I think the most valuable part is actually the intersession and post session work. Being forced to step back from the day-to-day workings of my project and reflect on it from a higher level helped me put it in perspective.” (Anonymous delegate, MP program, 2008)

Both BP and the UoM have gained valuable insights from the reflective practice papers. The papers have be cross-read by retired BP MPLs and a report on the practice of projects in BP has been submitted to senior management, leading to management action at the very top of the company. From the UoM perspective, a greater insight into the practice of projects and the workings of a major global company have been made available to faculty in support of teaching and research more generally. The papers also feed back into the development of the content of the program. For instance, the application of Snowden’s cyberin framework (Snowden & Boone, 2007) in the teaching of risk management has been developed
directly through interactions around draft, reflective practice papers, and many papers have provided insights and data for the development of the teaching on contracting strategy.

Figure 3. The high level Managing Projects unit framework.

Including a formal assessment process in the program provides a clear focus and additional motivation for delegates. Feedback from delegates themselves is that although initially daunting, the assessment process actually proved helpful, and they found the whole reflective practice process extremely valuable in improving real work situations and their understanding of program concepts and principles. Line managers in BP make it clear to delegates nominated for the program that they are expected to take the assessment seriously and that successful completion of the program will be a factor taken into consideration for career progression purposes.

The program currently leads to a Postgraduate Certificate for those who successfully complete all four units. A pathway has also been defined to build upon this, through further study and project work undertaken at the delegates own initiative, to a MBA degree from Manchester Business School Worldwide’s Global program. The MP program has received Academic Accreditation from the Association for Project Management (APM) in the UK. The UoM has also been approved as a Registered Education Provider (REP) by the Project Management Institute (PMI) so that delegates automatically received Professional Development Units (PDU) for successful completion of the program. This means
the program has academic credentials by leading to a Postgraduate Certificate from a leading UK university, together with professional recognition from both the APM and, internationally, from PMI.

**Program Evaluation**

The MP program is a multi-million dollar investment for BP in terms of the contract value to the UoM, the travel, and subsistence costs of the delegates and MPLs who participate in the program, and the opportunity cost of the delegates’ time. Naturally, BP wishes to know how well the program is performing in terms of adding value to BPs projects and engineering capability. Evaluation of the program is in place at two levels. Firstly and routinely, online feedback questionnaires are used to capture the delegates’ reactions to the sessions. These data – particularly the qualitative data in the comments – are acted upon. The organization of the program has been changed, sessions developed, and university faculty swapped in response to the feedback. As a result, the program has seen continuous improvement over the six cohorts delivered to date, as shown in Figure 4. The questionnaire includes eight items with a numerical response on a scale of 1 to 6 where 1 is Strongly Disagree and 6 is Strongly Agree (i.e., higher scores are better than lower scores). The mean score for all sessions across both residential weeks for a cohort is plotted. The pilot cohort is designated MP0.

![Figure 4. Overall means scores from the End of Session Questionnaires by cohort.](image-url)
This quantitative data is supported by comments from delegates in the End of Session and End of Week Evaluation questionnaires:

“Very much worth all the effort I put in to attend the course. Clearly for me the choice of MBS as the venue and delivery agent was the right one for BP. This university and its staff really does understand our business.”

“Great course, excellent structure, clearly the partnership of U of M and BP is a good one and opportunities to maximize the class potential is very big.”

“Very worthwhile two weeks. The academic angle to the programme provides more depth and challenge to thinking than would be obtained from a BP only Managing Projects Course.”

“Overall the program is very worthwhile. I am a better project manager for participating in the program.”

[When back at my job] “I will step back and really think of the issue before jumping to solve it and will always use the course materils (sic) and principles as a frame of reference.”

“REALLY REALLY good. I got so much out of this course at so many levels, personal, professional, educational, motivational etc etc. THANKS”

(Anonymous delegates, MP Programme, University of Manchester, 2008-2009)

However, we want to push evaluation beyond the delegate’s perception of the program and to attempt a more objective measurement. We therefore implemented the Behavioural Change Assessment project to assess changes in leadership style and emotional and social communication skills of participants over the course of the programme4. This assessment involves the completion of two measures – the Multi-Factor Leadership Questionnaire (MLQ) and the Social Skills Inventory (SSI), a measure of emotional and social intelligence. The MLQ is a 360° instrument consisting of 45 items designed to measure a full range of leadership behaviours. The structure of the MLQ reflects three dimensions of leadership measured by nine subscales. In addition, the MLQ also measures the impact and outcomes of leadership style on employee behaviours. See for example Avolio and Bass (2004), for a full description of this instrument.

4 We are grateful to Sue Cartwright for her help in developing the BCA program
The SSI is a self-report measure of emotional and social intelligence and consists of six subscales as shown in Table 3 (see for example Riggio and Carney, 2003, for further details).

Table 3. The SSI six subscales of emotional and social intelligence

<table>
<thead>
<tr>
<th>EMOTIONAL INTELLIGENCE</th>
<th>SOCIAL INTELLIGENCE</th>
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</thead>
<tbody>
<tr>
<td>Emotional expressivity (EE)</td>
<td>Social expressivity (SE)</td>
</tr>
<tr>
<td>Emotional sensitivity (ES)</td>
<td>Social sensitivity (SS)</td>
</tr>
<tr>
<td>Emotional control (EC)</td>
<td>Social control (SC)</td>
</tr>
</tbody>
</table>

The MLQ measures are taken before delegates join the program (Time 1) and again following completion of the program (Time 2) to assess changes in leadership behaviours. Delegates are encouraged to invite others with whom they work (their line managers, peers, and those they manage – ‘other raters’) to rate their leadership style. The SSI measures are taken during the first residential week (Time 1) and again after completion of the program (Time 2). These questionnaires were implemented for cohorts 1 and 2 but results have not yet been published.

Concluding Thoughts

Both BP and the UoM were keen to ensure that the MP program was firmly grounded in the practice of projects as they are currently defined and managed in BP. The learning objectives defined by BP were themselves grounded in the reality of managing BP projects. Also, the BP SMEs who contributed to the development of the program were representative of the range of BP businesses and project types, and they brought decades of rich experience into the program. Bringing together current research and thought leadership, with the practice of projects from a global firm delivering some of the biggest, most complex, highest risk projects in the world today, is a powerful combination. For the UoM this provides real benefits in terms of relationships and contacts within BP, insights into an organization and its culture, and the potential for exploring future research ideas. For BP delegates, they benefit from the latest research thinking and access to leading researchers in the field, together with insights from third-party firms, and indeed from across the BP group itself.

The relevance and ‘freshness’ of the programs are maintained by a rigorous continuous improvement process. This is based on detailed analysis of the effectiveness of every delivery, change, and developments within BP, current research in the management of projects, and developments in pedagogy.
Every session of every program is assessed by delegates completing an electronic end-of-session questionnaire, and each residential week is assessed by delegates completing an electronic end-of-week evaluation questionnaire. Data from these questionnaires are analyzed for trends across sessions and cohorts, and detailed comments from delegates are accumulated for action as appropriate. A formal management of change process ensures sessions remain consistent with the agreed learning objectives while allowing incremental improvements to proceed rapidly between deliveries.

The MP Program described in this paper is an example of a successful partnership between a major global company, dependent on the consistency and predictability of project delivery for its future, and a university with a rich tradition of research and teaching in the management of projects. Consistent with recognition that what is needed is reflective practitioners, grounded in the practice of projects, rather than trained technicians administering standardized procedures, and building on the Manchester Method of action learning, an innovative program design has been developed. The features of this design that make it distinctive include:

1. The framework of pre-work, residential weeks, inter and post session periods.
2. Content based on the need to produce reflective practitioners rather than based on the bodies of knowledge.
3. Reflective practice, action learning, and the reflective practice papers as a form of assessment.
4. Blended learning with rich Web-enabled tutor and distance learning support.
5. Award bearing and integrated into a suite of learning opportunities.
6. Research based but grounded in practical experience.
7. Engagement of subject matter experts from both the university, BP, and third parties.
8. External accreditation.

The program has been running for more than two years and its success to date has been confirmed by an extension of the partnership agreement between BP and the UoM. There is no reason why this model for managing projects practitioner development could not be applied to other academic-business partnerships. It does, however, require a significant dedication of management and intellectual effort from all concerned. The rewards that follow, for both parties and, most importantly, for the delegates themselves, are extensive.
References


