CONCLUSION

In the course of this discussion we have considered the nature of P-credits and the components receiving accreditation across all subjects in the University; the evidence of professional learning as revealed in student qualitative data 2007/08, and the nature of professional learning as presented in student narrative accounts of their placement. The examination drilled down from an overview of learning objectives, through the detail of outcomes anticipated, to the actual learning experiences of 28 students. Before responding to the three questions posed in this research, what does each of the three areas of investigation reveal?

1 P-Credits

The analysis of P-accreditation (Table 2, page 10) brought together for the first time the profile for P-credits in each subject area. This produced a map highlighting areas of commonality and divergence, and revealing the extent to which the University's regulations for assessment of PT are being observed. The aim of this study was not to investigate matters of quality assurance, so they are not addressed in this report. Similarly, the report makes no judgement on whether or not the period of PT contributes, or should contribute, to the degree awarded. It will be for PTCC to consider any pertinent issues emerging from the research.

Assessment by the supervisor

The focus of assessment by the supervisor is largely related to generic and subject-specific skills and the application of theory to practice. Such assessment relies upon subjective judgement. There is considerable variation in the degree to which the workplace supervisor is expected to assess the student, ranging from 0% to 54% of the total 120 P-credits. This report has raised the question, why? Are workplace colleagues not involved in the assessment because there is an appreciation of the difficulties of assessing 'wicked' competences? Or is there some covert assumption that workplace supervisors/colleagues should not be asked to take on the role of assessor? If the latter is the case, does the reason lie in a desire to avoid conflict for a colleague who may be mentor to the student? Or is there a remnant of academic snobbery against 'lay' assessors?

This research poses these questions in the hope that it will stimulate debate on the issues relating to assessment of 'fuzzy competences' and the need to provide academic support when 'lay' assessment is required. Some departments demonstrate excellent practice in this respect, with clearly defined learning objectives and detailed criteria to support the award of each grade. For example, in Management, the assessment has now become

> "an SDR type arrangement where at the end of it there's a box for the student to complete (…)
> They should feel free to negotiate with you where you put all your marks. That gets a discussion
> going and I think in the process of discussion both parties learn and gain from that." (Alcott 2008)

Assessment by the visiting tutor

The findings relating to the visiting tutor's role in the assessment process are a mirror-image of those for the supervisor, giving rise to the same sorts of question. The degree of tutor assessment also ranges from 0% to 54% of the total P-credits.

When the nature of assessment made is probed, it appears that the tutor is evaluating the degree to which the student is applying theoretical knowledge and demonstrating generic and subject-specific skills. In addition to these, the student is also assessed on the quality of their reflection upon their experiences. In terms of the USEM model, this means that the assessment encompasses understanding, skills and metacognition. The subjectivity of such judgements can again be expected to be problematic.

We are beginning to see a pattern emerging: it is difficult to quantify competence ('doing') and to relate it to 'knowing and understanding', but assessment of 'being' and 'becoming' is even more fraught with ethical and practical difficulties.

Student reports

Departments are unified in their practice relating to the student report(s). Perhaps unsurprisingly given the academic tradition of essay and dissertation writing, there appears to be more confidence in using this form of assessment, despite the fact that much of the assessment relates to metacognition and efficacy skills, neither of which is easily measurable. The report(s) carries between 29% and 50% of the P-credits. This suggests that the difficulties of assessing metacognition and efficacy skills are counterbalanced by learning outcomes that are more easily demonstrated, such as essay construction or referencing.

Presentations

There is various practice in respect of when and where the presentation is given, in those subjects that require one. The level of recognition it receives is relatively low, at between 4% and 8% of the 120 credits, but the presentation and reports are combined in some instances.

The presentation provides an immediate illustration of the student's communication and analytical skills, again drawing on efficacy skills and metacognition, and revealing personal qualities such as self-confidence.

Attendance of Briefing/Debriefing

Five subjects were found to give accreditation for attendance of sessions before and/or after the placement. Like the presentation, such sessions provide an opportunity for students to reflect critically on their expectations and achievements, and to share these with others. Good practice is found where level 3 students are involved in the preparation of level 2 students for their placements.

Additional Academic Work

The debate as to the role of academic work in professional training is well rehearsed. Contrary to fears that the inclusion of additional academic work may detract from the PT experience or unfairly prejudice the less academic student, it is clear that in the subjects where such work is required the focus is on critical reflection, metacognition and efficacy skills.

In sum, the map of P-credits has demonstrated which aspects of professional learning are assessed. These include all elements of the USEM model: understanding is shown through the application of known theory and acquisition of new knowledge; generic and

subject-specific skills are developed and evaluated; critical reflection demands efficacy and metacognitive skills.

When viewed in terms of Barnett's three actions, *knowing* enables *action*, which in turn leads to further knowledge and *becoming* more professional. The mapping of P-credits and comparison of learning outcomes that are assessed has led us to question whether the contentious element of assessing professional development lies, essentially, in the latter domain: knowledge and action are more readily quantified than is 'being' or 'becoming'.

Due to the need to change the research methods, it has not been possible to explore this hypothesis fully through interview with tutors. Those who were interviewed were not daunted by their task of assessing 'the journey' their students go through, but they may not be typical of their peers.

2 Student Feedback, Placements 2007/08

The rich qualitative feedback from 455 students who were on placement in 2007/08 provided the second data source for this study. As has been seen, four categories of learning emerged from the reading:

- Personal qualities, which had 28 elements
- Generic skills, of which there were 35
- Subject-specific skills, 45 of which were cited
- Subject knowledge, 45 aspects of which were mentioned.

Personal Qualities

Of the personal qualities, two were cited in all 4 Faculties:

- Increased confidence
- Sense of gained maturity

The absence of citation in a Faculty may not be an indication that such qualities have not been developed; it may, rather, reflect the unfamiliarity of students with expressing themselves in this regard, or alternatively their failure to see it as important to mention such development. It was suggested, however, that students in FEPS appeared to be well versed in reflection, possibly thanks to their PDP programme.

The two commonly found qualities are good examples of those elusive 'wicked competences' that are so difficult to assess. To use Barnett's model, they are related to 'being' and 'becoming', and cannot easily be quantified. Furthermore, evaluation is subjective and must be relative to individual circumstances.

When compared with the USEM model, the personal qualities identified span understanding, metacognition and efficacy skills. They were also found to be related to aspects of Eraut's learning trajectories 1 (task performance), 2 (awareness and understanding), 3 (personal development, 5 (role performance) and 8 (judgement). The highest proportion (n = 16) were associated with personal development.

Generic Skills

Nine of the generic skills were found in all Faculties, viz.

- Team work
- Independence
- Inter-personal skills e.g. relationship with clients
- Communication (oral, written, email, telephone)
- Time management/prioritisation of tasks
- Organisation
- Report writing
- Making presentations
- IT competence

It was apparent that FHMS students were highly focused on academic skills.

This category clearly corresponds with the USEM 'skills' and 'efficacy skills'. When mapped against Eraut's learning trajectories, correspondences were found with each trajectory, the greatest match being with 'academic knowledge and skills'.

The analysis produced an important finding: project management enables individuals to experience each of the learning trajectories, though not necessarily simultaneously, and patterns will differ according to individual circumstances. It has therefore been suggested that collaborative project work may offer a good alternative to work placement for those unable to have a year's professional training.

Subject-specific Skills

Although it had been anticipated that subject-specific skills would, by definition, relate to a given Faculty, there was some commonality, particularly in respect of IT competence. There was one area that featured in all four Faculties: application of theory to practice. This is one of the fundamental requirements for periods of placement, and students report greater understanding of their programmes of study as a result of having been able to test out their propositional knowledge. In return, they feel that they will be able to draw from their procedural knowledge during their final year of study.

As would be expected, the subject-specific skills correspond with the same USEM elements as do generic skills. In terms of Eraut's trajectories, they fall into 'awareness and understanding', and 'academic knowledge and skills'.

Subject Knowledge

It was acknowledged that subject-specific skills and subject knowledge were closely related, but the former refers to 'doing', procedural knowledge, whereas the latter is about 'knowing', propositional knowledge. For this reason the two categories of analysis were retained.

Three of the 45 aspects were common to all Faculties:

- Greater understanding of how a business operates
- Enabling a career decision
- Cultural awareness

The category equates predominantly with the USEM theme 'understanding' and with Eraut's learning trajectory 2, 'awareness and understanding'. In a few elements, it touches on trajectory 1, 'task performance', 5, 'role performance,' 3, 'personal development' and 4, 'academic knowledge and skills'.

If the four categories are compared across Faculties, an overview is shown of the range identified by respondents (Table 24). This table enables Faculties to consider how well they are meeting their own expectations of the learning outcomes desired for students in their subjects. As has been noted, the figures will vary according to the variety of disciplines in a Faculty, so raw scores alone are not significant.

Table 24 Perceived Learning Outcomes by Faculty

Faculty	Personal Qualities	Generic Skills	Subject Skills	Subject Knowledge
FAHS	19	20	18	17
FEPS	12	26	14	19
FHMS	6	18	12	16
FML	12	20	10	7
Total possible	28	35	45	45

This section of the analysis produced a map of each element of the four categories and compared them with the learning trajectories proposed by Eraut. Table 17 (page 34) summarised the number of elements from my four categories against Eraut's learning trajectories. For convenience, the table is reproduced again below.

Table 17 (second copy) Overview of Trajectories and Learning Outcomes, Student Feedback

	Personal qualities	Generic skills	Subject skills	Subject knowledge
TASK PERFORMANCE	2	5		1
AWARENESS AND UNDERSTANDING	5	6	45	43
PERSONAL DEVELOPMENT	16	6		1
ACADEMIC KNOWLEDGE & SKILLS		10	45	1
ROLE PERFORMANCE	5	7		1
TEAMWORK		5		
DECISION MAKING/PROBLEM SOLVING		4		
JUDGEMENT	7	4		

The colour coding helps us to visualise the complexity of professional learning. To illustrate this, if we take one trajectory, task performance, we see that it may draw on 2 personal qualities, five generic skills and one aspect of subject knowledge, in individual combinations according to circumstances and experience. This suggests that assessment of performance must also consider potential elements of personality as well as achievement and knowledge.

When the table is read vertically, the complexity is even greater. For example, 2 personal qualities affect task performance, 5 may be affecting awareness and understanding, 16 may influence personal development, 5 task performance and 7 judgement. Generic skills may draw from each of the learning trajectories.

It is not claimed that the lists of outcomes cited by students are comprehensive: other students may put forward different perceived outcomes. However, the research has gradually led to a keener appreciation of the difficulties we recognise in trying to assess professional development. Increasingly, the contentious elements are revealed to be those associated with the individual 'being' and 'becoming' as opposed to their ability to 'know' and 'do'. Without underestimating the task of assessing propositional and procedural knowledge, it is the 'wicked competences', those very personal qualities that will be intricately related to learning and doing, that render assessment of the outcomes of work experience so difficult.

In order to gain greater insight into the experiences that have led to their professional development, we turned next to the students' accounts of their placements.

3 Student Narratives

Perceived learning outcomes

28 student narratives were analysed and produced 32 learning outcomes. They comprised a mix of knowledge, understanding, skills and personal qualities. Each story was then mapped against these emergent outcomes (Table 18, page 37). The following eleven were found to be the most prevalent:

- Being given responsibility/trusted (24)
- Feeling valued (18)
- Having a variety of work (20)
- Applying coursework/being able to apply workplace learning to their programme of study (20)
- Acquiring new skills or knowledge (23)
- Having challenging work (23)
- Learning to communicate with different levels/types of people (19)
- Being part of a team (26)
- Independent working/self-direction (19)
- Time management (19)
- Organisation (19)

Individual narratives cited or implied from 4 to 20 of these learning outcomes, but the same caution as before is noted: some students may have achieved outcomes that they omitted from their accounts.

Consistency of emergent learning outcomes with learning trajectories

The 32 learning outcomes were next compared with Eraut's learning trajectories and found to be consistent. Table 19 is reproduced below to remind readers of the detail and correspondences. This visualisation once more reveals the complexity of learning: by reading vertically, it can be seen that each of the learning trajectories can be achieved through a variety of outcomes. For instance, Task Performance, trajectory 1, is achieved through seeing a task through to the end, by the degree or lack of challenge it poses, it

may involve networking and develop communication skills, team membership is likely to be an element, and sometimes it draws on individuals' volunteering to undertake additional tasks or roles. As before, every situation will be unique and combine elements in ever-changing patterns.

If Table 19 is read horizontally, another important finding is revealed: one learning outcome, the experience of having seen a task through from start to end, potentially involves each of the learning trajectories. This is reminiscent of the finding that emerged from the student feedback discussed above, that projects are a potentially rich learning experience which may also provide opportunities to develop along all eight trajectories.

Table 19 (second copy) Emergent themes and learning trajectories, student narratives 2008

EMERGENT THEMES	LEARNING TRAJECTORIES								
	1	2	3	4	5	6	7	8	N
Responsibility/trust					●				24
Delegation to/training others					●	●			9
Budget management				●					3
Feeling valued		●							18
Seeing through start to end	●	●	●	●	●	●	●	●	9
Unpredictability, ad hoc tasks					●		●		10
Variety				●			●		20
Apply coursework/vice versa				●					20
New skills/knowledge				●					23
Challenge	●		●		●				23
Demotivation through lack of	●		●						1
Enabling career decision							●		17
Inspiring/enthusiastic staff		●						●	12
Role models in workplace			●					●	4
Networking	●		●			●			11
Hospitality/socialising events			●			●			12
Communication different levels	●	●	●			●		●	19
Workplace behaviour		●				●			16
Being part of team	●					●			26
Independence		●	●				●		19
Time management, prioritising					●			●	19
Organisation		●	●						19
Punctuality			●						6
Attention to detail								●	10
Job application processes		●		●					10
Benefits of work experience		●					●	●	10
Report writing				●					7
Written skills				●					10
Presentation giving				●					7
Cultural awareness		●							6
Volunteering additional tasks	●								9
Additional qualifications				●					3

Learning Trajectories:

1 Task Performance
2 Awareness and Understanding
3 Personal Development
4 Academic Knowledge and Skills
5 Role Performance
6 Teamwork
7 Decision Making and Problem Solving
8 Judgement

When the 32 learning outcomes were converted to learning trajectories, they were found to be too generic to be meaningful. Table 20 (page 39) showed that this resulted in all but two of the narratives indicating learning on all trajectories, hence failing to provide sufficient detail for us to learn from their experiences. For this reason, it was necessary to retain the detail of each learning outcome, rather than discuss it in terms of learning trajectories.

To permit comparison, each outcome was codified within its corresponding trajectory/ trajectories. Hence, Task Performance, trajectory 1, comprises:

  1.1 seeing through from start to finish
  1.2 challenge of task
  1.3 demotivation if challenge is too low
  1.4 networking
  1.5 communication with different levels of seniority
  1.6 being part of a team
  1.7 volunteering for additional tasks

Table 21 is reproduced as a reminder of the codes used.

Table 21 (second copy) Codes for subsets of learning trajectories, student narratives 2008

EMERGENT THEMES	LEARNING TRAJECTORIES								
	1	2	3	4	5	6	7	8	N
Responsibility/trust					1				24
Delegation to/training others					2	1			9
Budget management				1					3
Feeling valued		1							18
Seeing through start to end	1	2	1	2	3	2	1	1	9
Unpredictability, ad hoc tasks					4		2		10
Variety				3			3		20
Apply coursework/vice versa				4					20
New skills/knowledge				5					23
Challenge	2		2		5				23
Demotivation through lack of	3		3						1
Enabling career decision							4		17
Inspiring/enthusiastic staff		3						2	12
Role models in workplace			4					3	4
Networking	4		5			3			11
Hospitality/socialising events			6			4			12
Communication different levels	5	4	7			5		4	19
Workplace behaviour		5				6			16
Being part of team	6					7			26
Independence		6	8				5		19
Time management, prioritising					6			5	19
Organisation		7	9						19
Punctuality			10						6
Attention to detail								6	10
Job application processes		8		6					10
Benefits of work experience		9					6	7	10
Report writing				7					7
Written skills				8					10
Presentation giving				9					7
Cultural awareness		10							6
Volunteering additional tasks	7								9
Additional qualifications				10					3

7 Sample Narratives

In order to examine the nature of placement experiences that had led to rich learning outcomes, six narratives were selected. They were those which each involved from 18 to 20 of the 32 potential outcomes. These were contrasted with the apparently least-rich experience, a narrative where only four outcomes emerged.

The seven students' placements had taken place in a wide range of employment, from small enterprises to multi-national companies; those financially secure to one which went bankrupt during the student's placement; the private sector, charities and public sector; in the UK and overseas. The period of placement was from 4 months to over a year. Each set of experiences and context was unique but they shared development of skills, knowledge and personal qualities, resulting in the narrators feeling that they had undergone a transformative experience. They had had opportunities to apply their academic learning, moving between propositional and procedural knowledge, and in terms of the USEM model, there was evidence that each element (understanding, skills, efficacy skills, metacognition) was enhanced. Consistent with Barnett's model, they had engaged in *action* and *learning*, so *becoming* different.

The first task was to convert each learning outcome indicated to the corresponding code, as given in Table 21. This produced blocks of colour that enabled comparison either laterally, for each outcome across all seven narratives, or vertically, for an overview of outcomes per narrator. Table 24, page 54 showed this.

A metaphor was emerging whereby each learning outcome was seen as a colour-coded cord in a plaited rope of learning trajectories. This rope of professional development would be in constant change according to the circumstances, qualities and competence of actors.

Superficially, it seemed that professional development was greatest when learners were challenged with situations or tasks that pushed them to new levels of performance, and they benefited from having role models whom they respected and could emulate. When examined more analytically, as cords of this rope, they produce a kaleidoscope of ever-changing patterns. A cross-section showing the frozen moment for some of the narratives was viewed earlier. Figure 7, below now reveals the cross-section for all seven narrators.

The images are able to show the learning outcomes involved in each experience, but they do not indicate the comparative importance of these. To make the image more representative still, the size of each component should be scaled up or down. Nevertheless, it is clear that the six rich experiences enabled development along all eight learning trajectories. By contrast, narrator 15 recognised outcomes of only 3: task performance, academic knowledge and skills and teamwork. The latter profile reminded us of the contingency of any finding: for this student, her development was significant, though by comparison with the other six, it seemed modest. She had achieved the goals she set herself and gone on to develop some qualities that she had not anticipated.
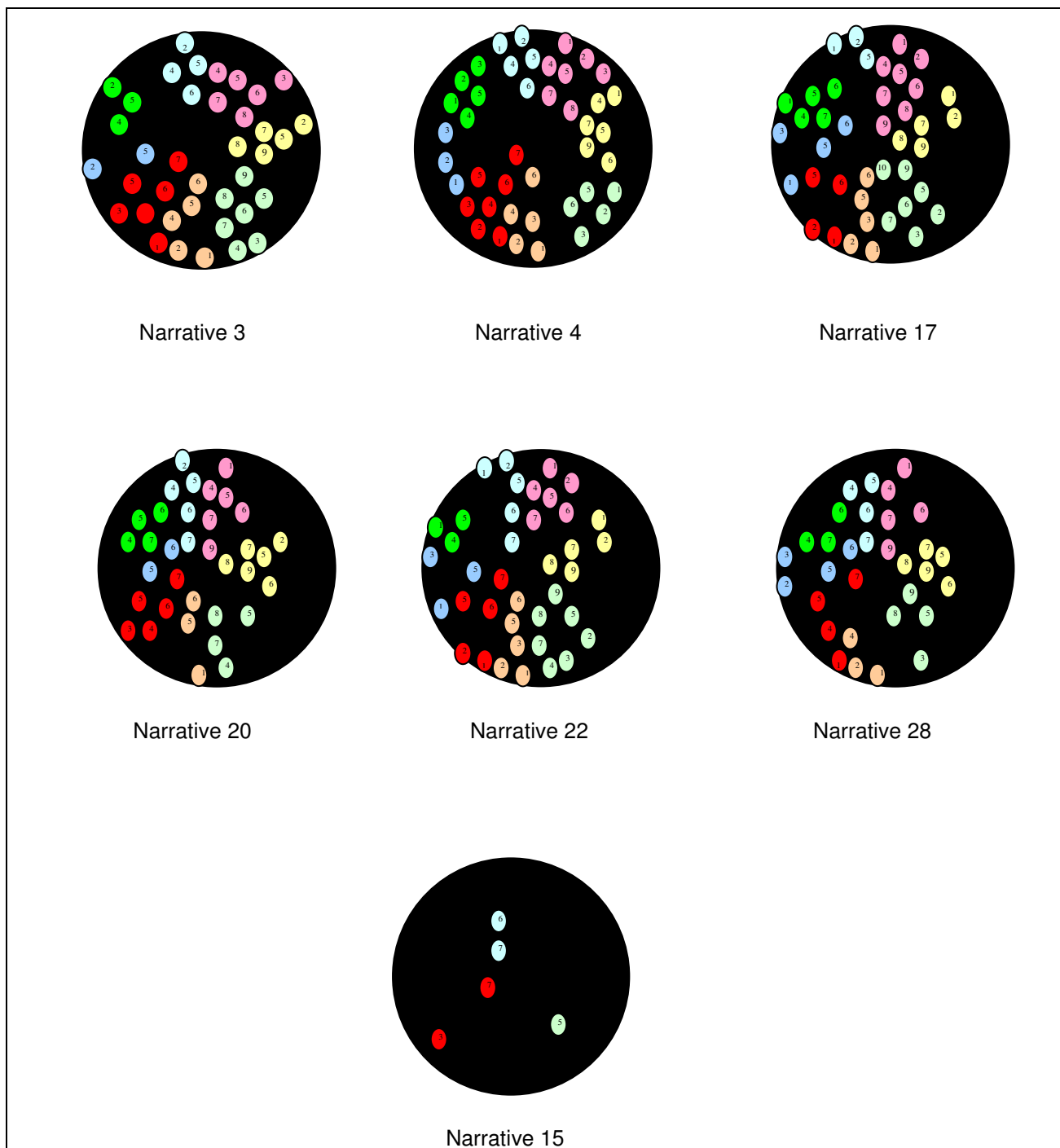
Narrative 3   Narrative 4   Narrative 17

Narrative 20   Narrative 22   Narrative 28

Narrative 15

Figure 7. The Rope of Professional Development for Individual Narratives

Replicating the work experience on campus

The analysis of narratives has shown that project work offered opportunities to develop all learning trajectories, as did being able to see through a task from start to end. It was asked, as each story was discussed, whether the student's experiences could be reproduced in the university setting, perhaps by devising a group project, to benefit those unable to have a period of work experience. In each case, one vital element was found that cannot be totally replicated through a simulation: the reality of the task and role performed. It was knowing that there would be repercussions for the business or individuals, if tasks were not completed correctly, or that the work engaged in had a

demonstrable impact, that stimulated, frightened and enthused the students during their placements. Any attempt to simulate their experience on campus would require suspension of their disbelief. They can be helped to develop skills and knowledge, to reflect critically on their experiences, but can a sense of reality be induced? It seems that they can develop *knowing* and *doing* in simulated situations, but their potential to *become* professional cannot be achieved to the same extent without real engagement in the world of work.

It is timely now to respond to the 3 questions posed at the beginning of this research.

1 Can we identify and draw benefit from the student PT experience in order to enhance the curriculum?

This first question is really two, each of which must be answered differently. The analysis has shown us that yes, we can identify what makes the student PT experience so enriching: this has been found to comprise a combination of opportunities to apply theory to practice, which will increase both propositional and procedural knowledge. Through experience and greater understanding, confidence as well as competence is built, which in turn interacts with personal qualities, enhancing and developing the individual so that a transformation occurs. The result is a sense of being more 'mature'. This has been discussed in Barnett's terms of 'doing', 'knowing' and 'being/becoming'.

The second part of the question, how to enhance the curriculum to draw benefit from this understanding of the transformative experience, is more complex. We can bear in mind, when devising tasks, that they should enable students to draw on their theoretical knowledge to demonstrate their understanding of concepts through practice, but how can we guarantee that we effect ontological change? Clearly, we cannot be certain of this learning outcome. It is too subjective, and the degree to which it may be achieved will be relative to the individual circumstances of each student.

This begs a further question, how can we fairly assess such intangible outcomes? We recognise when transformation has occurred, but can we quantify it or compare one individual's development with that of another?

The analysis of students' comments and narratives has confirmed that their workplace learning progresses along the 8 trajectories identified by Eraut, viz. task performance, awareness and understanding, personal development, academic knowledge and skills, role performance, team work, decision-making/problem-solving, and judgement. Two important findings emerged from this detailed analysis:

  1 collaborative projects provide an opportunity for learning along all eight trajectories;
  2 tasks which enable students to see something through from start to end also potentially enable learning along all eight trajectories.

The implications for curriculum planning must be that group project work is desirable. Being able to work through from planning to delivery, with members of the team having defined roles can provide a degree of simulated reality. However, as has been noted, the sense of urgency and meaningfulness experienced in the actual workplace cannot easily be replicated.

A good example of how the curriculum already provides such opportunities is found in an optional module offered by the School of Management, where students plan and run an event. Here, the task is real, and it has a budget, as it would in the workplace. Students must negotiate with external agencies to purchase services and goods. At the end of their project, they produce an exit report which they present to their 'Board.'

This imaginative module has overcome part of the difficulty associated with simulation: the task is real. It is a small-scale experience of the working world, which draws on knowledge, develops this and skills and enables students to become experienced. By extending the duration of such a module, it would permit students to have a prolonged opportunity to develop their 'workplace' relationships, further enhancing the simulation.

Recommendation 1

The first recommendation to arise from this research is:

Consider the opportunity to build into the curriculum at any level collaborative projects, with clear learning objectives that entail development along each of the eight learning trajectories.

Support tools

To support this, a tool could be developed from the model that has evolved in this research. This might adopt one of two approaches, but both would require greater definition than the simple title of the trajectory.

> 1 The eight trajectories could be provided and subdivided into predetermined learning outcomes, using the detail produced in Table 12, page 29, or some variation of the learning outcomes found through the analysis of student narratives. Students would then have to reflect critically on their experiences and keep a log of their activities throughout the project, showing how they have developed along each of the learning objectives. Table 25, overleaf, offers an example of how the tool might be formulated.

Table 25 Sample Support Tool 1, Predetermined Learning Outcomes

Learning Trajectory	Learning developed/achieved	Experience that led to learning/date	Experience that led to learning/date
TASK PERFORMANCE	Speed and fluency		
	Complexity of tasks and problems. Range of skills required		
	Communication with a wide range of people		
	Collaborative work		
AWARENESS AND UNDERSTANDING	Other people: colleagues, customers, managers etc. Context and situations		
	One's own organisation		
	Problems and risks		
	Priorities and strategic issues. Value issues		
PERSONAL DEVELOPMENT	Self evaluation		
	Self-management. Handling emotions		
	Accessing relevant knowledge and expertise. Disposition to learn/improve own practice. Ability to learn from experience		
	Building/sustaining relationships. Disposition to attend to other perspectives. Disposition to consult/work with others		
ACADEMIC KNOWLEDGE & SKILLS	Use of evidence and argument. Using knowledge resources (human, paper-based, electronic)		
	Accessing formal knowledge. Learning how to use relevant theory in a range of practical situations. Theoretical thinking		
	Knowing what you might need to know		
	Research-based practice		
ROLE PERFORMANCE	Prioritisation Range of responsibility		
	Leadership. Accountability .Supervisory role. Delegation. Supporting other people's learning		
	Coping with unexpected problems. Crisis management. Keeping up-to-date		
	Handling ethical issues		
TEAMWORK	Collaborative work. Joint planning and problem solving		
	Facilitating social relations		
	Ability to engage in and promote mutual learning		
DECISION MAKING AND PROBLEM SOLVING	When to seek expert help		
	Dealing with complexity. Problem analysis		
	Managing the process within an appropriate timescale		
	Formulating and evaluating opinions. Group decision making. Decision making under pressure		
JUDGEMENT	Quality of performance, output and outcomes		
	Priorities. Levels of work. Value issues		

2 The second tool is a variation on the first, but does not predetermine the learning outcomes expected. Instead, it provides only the learning trajectories, with examples of what might be achieved along each. Students would then make their own analysis of what they felt they had achieved, keeping a log as for tool 1. Table 26, overleaf, provides a possible lay-out for this.

In both cases, departments would need to decide whether the student logs should be assessed and, if so, the criteria and mechanisms. Any assessment will need to bear in mind the difficulties that have been observed in assessing 'wicked competences', the nature of 'being' and 'becoming', and the subjectivity both of a judgement and of the individual's progression.

A final exercise might be for students to produce their own colour-coded rope of professional development. They could then share this both with other members of their group, in order to compare the learning achieved through different roles, and with similar role holders in other groups, to compare whether there was any commonality by role.

Table 26 Sample Support Tool 2, Student identifies Learning Outcomes

Learning Trajectory	Learning outcomes	Experience leading to learning/date	Experience leading to learning/date
TASK PERFORMANCE			
AWARENESS AND UNDERSTANDING			
PERSONAL DEVELOPMENT			
ACADEMIC KNOWLEDGE & SKILLS			
ROLE PERFORMANCE			
TEAMWORK			
DECISION MAKING AND PROBLEM SOLVING			
JUDGEMENT			

Some examples of learning outcomes: [list by trajectory]

Recommendation 2

Annual feedback from students mentions that one of their greatest learning outcomes has been how to get up and arrive punctually for work each day. A second recommendation is indicated, which, on the surface, appears simple to achieve, but which in practice requires either motivation or inducement:

Expectations of students' punctuality and attendance, especially at level 3, should be raised, to prepare them for the reality of professional life.

When discussed with one experienced senior tutor, he was predictably sceptical as to the practicability of this proposal. As students increasingly see themselves as clients, purchasing a service, compulsion of this nature becomes less possible. But is there really no reason why we should not expect final year undergraduates to begin/continue the transition to professional behaviour?

We turn next to research question 2.

2 What can we do at Level 3 to build on and extend the development of those who undertook a placement year?

This question assumes that students will have returned from placement with greater knowledge, skills and maturity than they possessed when they left the previous year. In other words, that they will have undergone a transformative experience. Is this a fair assumption? The analysis of the narratives would suggest that it is: even narrator 15, who, by comparison with the others, had more limited development, had, in comparison with her former self, demonstrated considerable professional development.

Question 2 therefore asks what we can do to recognise placement students' transformation between levels 2 and the beginning of level 3, and how we may sustain their sense of 'being' different. Once more, the answers lie in appreciating that their development will have had those three dimensions: knowledge, action and being/becoming. Opportunities need to be found which will, ideally, not only sustain these new professionals, but also enable them to continue their professional development despite returning to the role of student.

The enormity of this task cannot be underestimated, and is further compounded by the fact that level 3 students are a mix of those who have returned from a year's professional placement, and those who have come straight from level 2 studies. In response to my asking whether he could tell if a level 3 student had been on placement or not, Dr Alcott replied:

> "It's difficult to pinpoint it (…) But I think the difference that I notice the most
> is probably their self-confidence, which is much better."

As before, the emergent evidence that projects potentially support professional development of all eight trajectories may be harnessed here, too. But whereas in response to question 1 it was proposed that the projects be collaborative, here, the traditional dissertation or extended essay may be better suited to enabling the student to combine procedural and propositional knowledge with critical reflection that continues to give them the professional edge that they report as a result of their work experience.

Recommendation 3

My third recommendation is, then, that *final year projects/dissertations are ideal for sustaining and continuing the development of understanding, application of generic and subject-specific skills, and personal development as a professional*.

This begs the question, should assessment of projects include evaluation of skills, competences, understanding and 'wicked competences', those elusive and subjectively valued, personal qualities? Or is the professional development intrinsically valuable, as it will enable the individual to perform better in the graduate selection process? Any attempt to answer this would be subjective. The recommendation must simply be that the decision to include or exclude assessment of wicked competences must be made after careful consideration of the advantages and disadvantages, and in the context of the resources available. For whilst it would be ideal to ignore the latter, and come to a purely pedagogical response, this would be unrealistic.

While the academic project permits development of some elements of the learning trajectories, there are others which are better suited to interaction with people. Some departments already involve those who have been on placement in the preparation of level 2 students as they begin to plan a professional year. This may be by attending classes and giving presentations to level 2s or as peer advisers on a one-to-one basis. SCEPTrE and SPLASH offer opportunities for students to volunteer for various roles designed to provide support to fellow students, as does the DAVE project overseen by the Students' Union. Such activities recognise individual development, and the transitional stage that these students have reached as both final year undergraduates and young professionals with formal work experience. By giving them greater responsibility, they can straddle the two camps.

Recommendation 4

The next recommendation is that *opportunities be offered and increased give responsibility to those who have been on placement e.g. in providing peer support and input at other events such as Open Days, to act as ambassadors, in recognition of their being more than 'just' final year undergraduates*.

Another element of the final year which marks the transition of these students is highlighted by Peter Alcott:

> "And then we start getting the employ, the employers come round. There's interviews going on and they're writing away for places, and we're doing references all the time."

In other words, the final year is already more than just study: there is movement and interaction with the Careers Service and employers. Related to the last recommendation is another:

Recommendation 5

Provide opportunities for those who have had work experience to conduct interviews with those who have not been on placement, and/or level 2 students preparing for placement.

As was observed by one of the Tonmeister respondents, having been on the selection side of the table gave him even greater insight into the interview process, which would inform his future performance at interview.

This last suggestion could be built in to the integrated programme for PDP. By planning a spiralling programme that spans each year of the academic programme, the transition from candidate to *quasi* employer could be incorporated.

The aims of the last 3 recommendations are to illustrate how the professional development of returning students can be recognised and call for integration across student levels. Without wanting to split the student body artificially, consideration might be given to a further recommendation, deriving from discussion with Professor Ward:

Recommendation 6

Consideration should be given to the point of differentiation amongst students being moved from the traditional under-/post-graduate marker, to the point of transition to level 3.

Provision of common-rooms for level 3 students could potentially sustain their sense of being more than students, and enable them to provide role models for their fellow level 3s, those who have not had a year's placement. The implications of such a suggestion are so vast that the recommendation is simply that the idea be given serious consideration.

Finally, I address the third research question:

3 What can we do to enhance Level 3 for all students, including those who did not undertake a placement year?

This final question moves away from those individuals who have undergone professional development and returns us to the curriculum itself, as it affects all students.

Some of the previous recommendations are relevant for all students: the dissertation/project is an ideal means of allowing assessment of individual performance irrespective of previous experience. It has already been stressed that this permits individuals to demonstrate their knowledge, skills and critical reflection, and crucially to develop self-confidence, the quality raised so often in their feedback.

Group projects, as discussed above, are a potentially rich element of the curriculum, but the final undergraduate year is too intense for this to be the place for such exercises. Levels 1 and 2 are better suited to development of the skills and understandings that collaborative work has been seen to support.

Recommendation 7

Perhaps the best way of supporting all level 3 students lies in the content of the PDP programme. There are some departments where there is an integrated programme of professional development, permeating the whole programme of study. The clear recommendation here must be that *all departments work towards a model of integrated PDP.*

This research has drawn extensively on Eraut's learning trajectories, which could be used as the framework for developing activities at each academic level. Curriculum planners could begin with frameworks such as those proposed in Tables 25 and 26, above, and identify their learning objectives for each year of the PDP programme.

Recommendation 8

In a variation of recommendation 7, which is for curriculum planners, these same support tools might be used by all level 3 students, irrespective of work experience, to assist them to reflect critically upon their professional development.

Level 3 students should be offered the opportunity to keep a map of the professional development using the learning trajectory model illustrated in Tables 25 and 26.

Recommendation 9

Another element of the integrated programme of PDP should address an outcome that was mentioned by many students: their greater understanding of what is actually required of specific roles. This could be achieved by facilitating short periods of work shadowing and/or drawing on video interviews with employers/employees. A series of brief interviews with a typical range of people in the workplace could be produced and held within Faculties, centrally in the Careers Service, on-line and so on, providing a data source for self-access by students.

Provide opportunities for students to make more informed career decisions e.g. through work-shadowing or development of a video-bank of interviews with people in the work-place.

4 Supporting the professional development of those without placement but who have alternative work experience

The research should, arguably, have asked an additional question: what can we do to support the professional development of those who do not undertake professional placement, but who may have other experience or work? The focus of this question goes beyond support through curriculum development.

The very scheme of professional placement is severely threatened by economic recession, which may, in turn, have an adverse impact on student motivation to seek a placement. We are already witnessing long-standing placements being withdrawn, and students' contracts being terminated prematurely. How can we support the increasing number who are unable to enjoy the benefit of placement?

My own research conducted in 2005/6 and 2007/08 into the reasons for not engaging in professional training found that many respondents reported having alternative work experience. Given their average age of 20 years, this was mostly casual vacation or evening employment, the main objective of which was to provide a source of income. As such, it differs profoundly from the work placement, where learning objectives are defined and assessed, and the student receives professional and personal support in the workplace.

Are we missing an opportunity here, to enhance the work experience acquired but not formalised? It is an issue that I have discussed with some colleagues and that is already being considered by a group working through SCEPTrE. We have come separately to a the same point of seeking to build on Eraut's learning trajectories as a means of making more of the casual work experience gained by so many students. As I reach the end of this report, I have begun to explore collaborative work with colleagues in that group.

Recommendation 10

Seek means of supporting students who undertake part-time casual work, so that they are offered opportunities to reflect critically upon their experiences and achievements.

My initial idea builds upon the same model as presented above, in Tables 25 and 26, to enhance professional development from casual, part-time work. This would either enable pre-determined learning objectives for the work experience to be set, or would provide a tool for critical reflection by the student.

In either case, there would need to be liaison with the employer/workplace, and mentoring mechanisms would have to be put in place. This demands financial and time resources.

I hope to have the opportunity to join with the above-mentioned working group in taking forward this idea.

5 The desired and actual outcomes of this research

My original fellowship proposal set four desire outcomes:

  i.   to produce a Level-P curriculum map for learning outcomes
  ii. to provide a full report of my findings and recommendations
  iii. to disseminate my work through articles for SCEPTrE and wider publication
  iv. to contribute to conference workshops on the research, at, e.g. WACE, Vancouver 2009

  i.   The first of these has been achieved, as seen in Table 2, page 10. This will support PTCC in its work on aligning programmes with the two models of professional training approved by Senate (those which do and those which do not include PT in the degree award).

  ii.   This report is the evidence of fulfilment of the second object.

  iii. I have already had discussion with Professor Jackson about presenting the outcomes of this research. Copies of the report will also be made available of my fellowship wiki.

  iv.   I have had three peer-reviewed papers accepted for the WACE, Vancouver, conference, which draw in varying degrees on the concepts underpinning this research. It is my intention to submit papers for publication and further WACE conferences specifically addressing the research and its findings.

I am satisfied that, despite the lack of engagement of students in the interviewing process I originally intended, this fellowship has succeeded in achieving the four objectives.

One of the most exciting things though, has been an unforeseen outcome: the research has led me to a new conceptualisation of professional learning as a kaleidoscopic rope of professional development, constantly changing its pattern, as the professional's understanding, competence and very being evolve. This understanding will underpin my future work in building upon the recommendations made in this report, and when contributing to international debate in the field of co-operative learning/ work-integrated

learning. Closer to home, it begins to build the definition of what we mean by 'professional intelligence.'

In sum, there are two real areas where I hope to develop my findings within the University:

 1 in exploring whether we can increase critical reflection and bring about the professional development of students through their part-time, casual employment;

 2 in working with colleagues on developing the conceptualisation of 'professional intelligence.'

Both areas offer the University of Surrey an opportunity to reclaim its USP, and to become the leader once again in the field of professional training.