

Disaggregating the curriculum – from full meal to bite sized provision

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Abstract

This paper looks at the use of small curriculum packages as a way of engaging employees and employers in higher level learning. Starting from the creation of a suite of Foundation degrees, and seeking to provide a pragmatic and helpful response to the credit crunch of 2008/09, the team explored structures which would unpick the Foundation degrees and reconstruct them in ways which might be more attractive to potential work-based learners.

At the same time we were keen to incorporate some form of APEL, in order to accelerate appropriately a learner's accumulation of credit towards a fuller engagement with a Higher Education programme.

The work is still ongoing, and so evaluation of the impact of this development remains to be conducted. The paper incorporates feedback gained during the workshop presentation of the same name at the UVAC conference held in York in November 2009.

“The key ingredient for delivering the skills agenda is a credit framework, an approach that helps learners gain credit for the learning that they have acquired in the workplace. Then (they can) build on that through short courses at further education colleges, private providers or universities.”

Richard Brown , Chief Executive, Council for Industry and Higher Education, quoted in “Focus on Basic Skills not HE, say MPs” THE, 22 January 2009.

Context

The Foundation degree in Applied Professional Studies was recently approved by the University of Derby as part of the re-approval of the Lifelong Learning Scheme. This Fd has already been used to define a curriculum for the Events Management industry, which has a series of entry routes, offered through a disaggregated route. It is therefore worth exploring the genesis of this academic product.

The generic “shell” structure was developed from work done with a specific employment sector – the wood industry. This original development was done by a team including members from the Sector standards body (SSB) (which ensured that emerging National Occupational Standards (NOS) for the sector were taken into account when compiling the more specific elements of the curriculum), and several members of employing organisations and other representative bodies from across the sector. Indeed the academic approval statement commended the team for the robust nature of its engagement with the industry. The results of this work were a suite of three Foundation degrees, relevant to the sector, of which the common elements were significant, and so represented a framework which could be applied to any other sector.

The original development was funded by Foundation Degree Forward (FDF), as they saw the proposed relationship between NOS and academic standards as being a

demonstration of best practice in the development of employer-responsive Higher Education awards.

However, as the programmes were being validated, in November 2008, so the financial “credit crunch” was beginning. This exacerbated a situation which the programmes had in any case been seeking to address, that the wood industry had not engaged in any systematic way with higher level learning for more than a working generation. We needed to find ways of addressing the likely scenario that whereas there may be a need for the development of higher level capability within the industry, and the Foundation degrees had been specifically built around the knowledge, skills and understanding which would support the development of this capability, nevertheless individuals and employing organisations within the sector would be more likely to engage with smaller chunks of learning. It was felt that learners, who in this industry have not been familiar with HE, would prefer to have undertaken small or even “micro” credit chunks to build up confidence about their HE capabilities before committing energy and resource to a larger programme. Employers, likewise, would be keen to evaluate the cost/benefit of engagement before committing significant resource at a time of such economic constraint. These considerations echoed an informal mantra of the Lifelong Learning Scheme at the University, that although employers like the idea of Foundation degrees, “they couldn’t eat a whole one!” Such an approach is mirrored in the work of Fox, Williams and Smith at Cornwall College, where a similar approach was taken with the FdA Tourism, heritage and culture. (FdF, 2007), and in the findings of the CBI (2008).

There were two other imperatives which also encouraged us in this direction.. The first concerned the development and validation process. When HE programmes are developed from scratch, as these were, they are documented in a way which is required for academic approval. This leaves work to be done post-validation on the preparation of learning materials and other curriculum resources. An initial, smaller offer could be worked up more quickly and so offer a holding position while the “whole programme” resources are completed.

The second was external to the University. As part of the overall sector development work, the sector was promoting a credit accumulation model of CPD opportunity, and looked to collate existing industry-offered master classes and other training and development events and to promote and support the identification of new higher level events which would be accredited through HE or FE against both emergent NOS-based qualifications and the HE qualification framework. This model promoted a “step-on, step off” pattern of engagement and re-engagement by individuals, and used the analogy of a “paternoster” lift. Further, this analogy also presumes that each engagement with an individual part of the menu of the provision available moves an individual nearer to his or her personal and professional goals. (Such was the attraction of the analogy that health and safety considerations could not persuade them to use an alternative!)

With this range of drivers, we decided to look at how the Foundation degree programmes could be made available to industry through channels other than marketing the whole programme. It was agreed that we should unpick the content of the full Foundation Degrees, and re-package it in combinations and volumes that would be appealing to the target audience at least in their initial engagement with higher education.

Academic Structure – a supportive model for employer engagement

The use of credit to define volume of learning is now almost standard across HE. In line with this structure the university's credit framework requires that programme development teams identify individual learning outcomes for each module at any level, and thus the overall curriculum development process produces programmes which reflect the level descriptors that define the different levels of HE study and qualification. This level of alignment is still not standard across all providers even though it was identified as good practice 15 years ago! (Otter, 1994) This assertion reflects the conclusions of the Burgess Report (2007), and in turn is reflected in the Milburn Report (2009), whose Recommendation 30 proposed a transferable, credit-based learning system across the sector, precisely to encourage the engagement of part time learners. This recommendation was endorsed in the Higher Ambitions paper (BIS, 2009).

The Foundation degrees were constructed within this credit framework, and so 120 credits at each level were divided into a series of modules, with the whole of level 4 as a common curriculum, and the specific pathways defined by differential curriculum at level 5. Within each level, therefore there was a series of modules, all of 15 credits (except a 30 credit "double" project module at each level.) Most modules identified three learning outcomes, in line with university guidance on curriculum development. Teaching, learning and assessment strategies were aligned with the intended learning outcomes of each module, to ensure a detailed mapping could trace student achievement of the outcomes. This was perceived as critically important for the employer partners who would ultimately invest their resources in funding their employees to undertake the development of higher level capability, and unsurprisingly would be keen to be able to identify precise opportunities for the return on that investment.

We adopted work-based learning approaches to contextualise the programmes and specifically to the definition of tools for assessment, so that each piece of assessment would seek to evaluate and demonstrate the real or potential impact of any particular theoretical input on a real world situation, task or problem.

We therefore had in effect a bank of learning expressed as individual outcomes, which were trackable within the Foundation degree, and also reflected the capability being identified as required by the industry through the construction of higher level NOS. The task we set was to translate this apparent flexibility into a reality.

The micro credit events that were being planned within the sector were intended to link, as stated earlier, to existing master class and other provision, offered through organisations such as sector training organisations. Typically these events would consist of a whole or half day session, operated at a training facility within the premises of a large employer, or a sector training provider.

Curriculum Design

At UVAC's Annual Conference we presented colleagues from a number of HEI's with the Business Fundamentals module outline with the Indicative content and module learning outcomes, and asked how they would disaggregate the curriculum to encourage access to HE whilst:

- Covering all learning outcomes
- Incorporating all aspects of curriculum content
- Maintaining the validity and effectiveness of assessment

- Ensuring coherence of learning experience
- Maintaining proportionality

Clearly, it was important to cover all the learning outcomes so that learners could then re-aggregate the bite sized pieces to gain credit against the modules if they then wished to gain a Foundation degree, or shorter award.

Many colleagues found that the most effective means of disaggregating the curriculum was to divide the Indicative content into 3 X 5 credit modules, accepting that it was possible that the learning outcomes for the module would be met more than once. The ways in which the curriculum was divided varied, although financial accounting was, in the majority of cases seen to be a useful discreet 5 credit module, which addressed a single learning outcome.

Similarly, the majority of colleagues grouped performance indicators and benchmarks together in a module, with policy deployment, feeling that this would address the first learning outcome “Develop business improvement strategies for a chosen area of business practice in a work related context”.

The second learning outcomes proved to be the most difficult to address in this method of disaggregation, as it relies on the assimilation of the various aspects of the indicative content to produce a sustainable plan for business operations.

<p>Module - Business Fundamentals – Level 4</p> <p>Learning Outcomes – A student will be able to:</p> <ol style="list-style-type: none"> 1. Develop business improvement strategies for a chosen area of business practice in a work related context 2. Assess and apply appropriate sustainability measures to the business operation 3. Apply basic principles of financial accounting in a work related context. 	
<p>Indicative content</p> <p>7 Key performance indicators Financial Accounting Benchmarking Policy Deployment Customer Care and Logistics Health & Safety and Risk Analysis</p>	<p>Micro Events</p> <p>1 Business Improvement Strategies</p> <p>Key performance Indicators Benchmarking Policy Deployment</p> <p>2 Sustainable Business Operations</p> <p>Customer Care and Logistics Health & Safety and Risk Analysis (+ Operational aspects of Policy deployment and benchmarking)</p> <p>3 Financial Accounting</p>

Table 1: Disaggregation summary from HE colleagues at UVAC

In discussion it was felt that it was not possible to disaggregate the curriculum by the learning outcomes, or indicative content alone, but the two must be considered in tandem to ensure that the learning could then truly be re aggregated. We also

maintain the importance of considering not just the knowledge and skills outcomes, but also the practical and transferable skills, which can easily be lost in content driven curriculum. A model which is wholly driven by the indicative content and knowledge acquisition needs to ensure that there is time and support for the development of such skills, thus the Derby approach is not to have 3x5 credit module, but to have 2x5 credit modules with an APEL element to assimilate and reflect on the learning to ensure that the opportunities for the development of transferable skills are not lost, and this also helps the learner to identify coherence within the curriculum, a further concern that had previously been expressed.

<p>Module - Business Fundamentals – Level 4</p> <p>Learning Outcomes – A student will be able to:</p> <ol style="list-style-type: none"> 1. Develop business improvement strategies for a chosen area of business practice in a work related context 2. Assess and apply appropriate sustainability measures to the business operation 3. Apply basic principles of financial accounting in a work related context. 	
<p>Indicative content</p> <p>7 Key performance indicators Financial Accounting Benchmarking Policy Deployment Customer Care and Logistics Health & Safety and Risk Analysis</p>	<p>Micro Events</p> <p>1 Codes standards and benchmarking – modern business planning</p> <p>Global regulations, codes and standards in the manufacturing and construction industries - including those related to employment and products. Routes to market codes of practice Major drivers of regulatory change, including political agendas, climate change, sustainability and security. Benchmarking of performance and products Expectations and preferences in supply/procurement activities – quality, cost and sustainability Strategic planning for change</p> <p>2 Corporate social responsibility – meeting expectations and requirements</p> <p>Government policies – procuring the future AA 1000 assurance standard BS 8900:2006 – guidance for managing sustainable development Environmental reporting</p> <p>3 Financial Accounting Principles of Accounting Reliability for the user Cost accounting</p>
<p>APL wrap:</p> <p>To take account of customer care, KPI's and Health and safety</p>	

Table 2: Business fundamentals module with Derby solution

Derby Solution

Through the use of the Lifelong Learning Scheme of the university, it was possible to construct an academic shell for such events, so as to be able to recognise them for academic credit, albeit in appropriately “micro” amounts. A combination of reflection on the purpose of an individual’s engagement with the event, and the potential or real impact on workplace practice of the event, together with an academic assessment of the level of the input during the event itself, enabled us to accredit several of the existing events during the period immediately before the approval of the Foundation degrees. It was therefore clearly possible to conduct this exercise from the other direction, and use academic programme learning outcomes from the Foundation degrees as the basis for the definition of new micro events. In creating such events we would therefore address the issue of initial buy-in to a whole Foundation degree for both employer and employee; employers would be able to gauge the effectiveness of the programme by trying a bit of it, and looking to assess impact, (though perhaps with a caveat about expecting instant results) and it would help to support employees becoming very new and unpractised students to acclimatise to the demands of an HE curriculum by providing an opportunity for incremental engagement and early recognisable achievement.

In order that such engagement would then be transferable into the degree without formality and particularly without erosion of the accumulated credit against specific elements of the programme, we decided to create a wrap-around APL device which would operate alongside the micro events. So each event would reflect a specific learning outcome from a specific module. Participating in three such events, provided they were linked to the same module, would therefore provide inputs relating to each of the module learning outcomes. Learners could then reflect holistically on the full module in real world context, using a structured APL type of workbook which would be constructed so as to produce appropriate material (when set alongside the outputs from the three micro events) for the module assessment. Thus we could create evidence of achievement in line with normal academic expectations for a student on the module, and so to be able to award specific credit within the Lifelong Learning Scheme for the module in question.

In discussion it was also recognised that this approach might appeal particularly to qualified practitioners across different sectors. The use of CPD points to regulate professional practice is common in some areas, but this does not translate into academic recognition unless the individuals compile a formal AP(E)L claim.

An example of how this disaggregation can be charted is in the diagram (Figure 1) below. Here, the learning content of each of the micro events relates directly to one of the module learning outcomes. The APL wrap document would seek to contextualise this learning from the perspective of the elements of additionality which are indicated within the broad indicative content.

The APL Wrap

The following format would fulfil the broader requirements of the module specified above, and would therefore produce the evidence to be assessed through normal academic processes, in order to confirm the full modular credit.

1	Your organisation
	What kind of business do you work in?
	Does your business offer a service or product for its customers?
	Where do you work in the business?
	Describe your work setting.
	Are you part of the manufacturing, service or administration department?
2	Your role
	Explain your work role?
	Who do you report to?
	Who are you responsible for? (include here an organisational chart that highlights your role and position in the company.)
	Which resources are you responsible for?
3	Benchmarks
	What standards or benchmarks do you use within your workplace?
	Why are they important and how do you monitor performance against these?
	What are the industry drivers for standards and benchmarks?
	Are there any relevant government initiatives or documents and how do they impact on policy?
	What effect do standards and benchmarks have on your customers?
4	Improving performance
	How could you improve the way that you monitor performance against a chosen benchmark or standard?
	Is there any current legislation which affects this?
	Are there any potential future developments that you need to consider?
5	Health and Safety
	Do you know who the health and safety officer is in your department?
	There will be health and safety information poster in your work place. - Find It.
	Name the important areas the poster is discussing and say why you think these areas are important?
6	Change
	If you were in charge what would you change in your department and why would you change it?
	Is the change to do with tools and resources that you use or with the people that you work with?
	Justify the changes in relationship to improving what you do.
	Are there any health and safety or other risks associated with your suggested change?
7	Finance
	What are the financial implications of the change you have considered?
8	Customers
	Who are your customers?
	What services or products or both do they purchase from you?
	How would changing the price of the service or product or both affect the customer?
	How will this change affect your customers?
9	Reflection
	Thinking back to the time before the workshop: reflect on what you needed to gain/

know/ understand from attending it.

Think about any differences in your working practices now. Review the ways in which what you learnt in the workshop changed how you carry out processes or procedures.

Clearly the notion of credit accumulation supports incremental engagement. However, there is a justifiable concern that a collection of such small engagements would not produce a coherent academic experience when targeting a major academic award, such as a Foundation degree. It was felt that whilst the limits for this structure are not as yet enshrined in academic regulation, regulations do pertain to the maximum acceptance of credit for prior learning, and we would envisage that only one or at most two modules' worth of credit could be gained through the micro 3 or 5 credit event route.

Assessment

When presented with the Derby solution there was significant discussion about the assessment process- with key concerns about the proportionality of assessment in relation to the taster modules- there was a feeling that by disaggregating into shorter modules, the amount of effort for assessment required to gain 15 credits was significantly increased and could in itself be a barrier to engagement, for both learners and staff. Discussion emphasised for the learners the use of the workplace as the source of evidence of application of learning, and that therefore it was perceived that learners would find this more accessible, and the workload manageable, given that some of the evidence for assessment purposes would be drawn from real work documentation, contextualised by the learner's own writing.

Extensive discussion occurred about the notion of obtaining a Foundation Degree by 5 credit modules- and this polarised opinion greatly, with some vehemently opposed on the grounds of the loss of coherence of experience and the ability to assimilate learning . Others however felt that it was appropriate to be able to obtain a qualification in this way, citing the ability of the learners to demonstrate application of knowledge and skills in discreet and manageable packages.

From the staff perspective, however, it was accepted that the quality assurance processes of marking and moderation would still need to be in place, but proportionate to the amount of students' effort required.

Sector experts

The use of sector experts was something that the sector itself was very keen to promote, partly as a means of maximising engagement from the sector employers, who would see that genuine and relevant expertise was being employed to address current and relevant issues. It was also recognised as a way of ensuring knowledge transfer in both directions between the sector and the university . However issues to do with collaboration, which is defined quite rigidly in the Quality Assurance Code of Practice Section 2 (QAA, 2004) meant that we were only able to accept inputs from sector experts in one of two circumstances. Either the experts became Associate Lecturers of the university (the preferred solution) or we would be looking to ensure that all responsibility for academic decisions were the sole responsibility of staff back at the university. It was not feasible to approve a potentially endless series of collaborators for delivery of the programmes. In either case, the quality assurance of academic standards was specifically retained as a key university responsibility

Tracking achievement

Similarly, it was recognised that tracking students, recording achievement and maintaining momentum posed significant challenges to university systems, particularly where learners were undertaking modules for CPD opportunities. The University of Derby is well placed to manage such engagements through the Lifelong Learning Scheme - a credit framework that has rules to define the route for curriculum development, and student engagement. Specifically it allows the university to recognise learning in small chunks and give credit for these chunks. However, academic validity is reinforced by the overall lifelong learning framework structure which makes clear that small credit chunks on their own (i.e. less than the university standard 15 credit module) are non- portable and not meaningful until they are aggregated with other credits to build a programme that can produce some form of Award. Further developments of the framework, which may align with this model in the future, would see the framework able to recognise credit from different levels within the same minor award. So a University Diploma (minimum 60 credits) would enable students to engage in a narrow professional area (such as for example podiatry), and to pursue learning at a range of different levels from 4 – 7, in order to develop specialisms and address CPD requirements.

Certificate of achievement

In addition to the module based structure above, we also put together a Certificate of Achievement (30 credits at level 4), to enable further engagement with the programme before final commitment. This reflected the fact that of all the learners who engage in the Lifelong Learning Scheme through the award winning Learning through Work programme, a large majority have been engaged on programmes worth 30 credits. This Certificate of Achievement is aligned with learning outcomes from the Foundation degree programme. In this instance the outcomes which were deliverable were those relating to the Level 4 Work-based Project, a 30 credit module common to all pathways, and the precursor to the Level 5 project which was intended to be the demonstration of participants' achievement of high level capability in their work context, and through this to demonstrate value for money to their employers.

Through engagement with these two devices, participants would be able to accumulate 45 credits against the Foundation degree. These short course options can be approved within a very short timeframe through the university's existing Lifelong Learning Scheme mechanisms.

Figure 1 below shows how the engagement relates to the overall program.

The accumulation of credit towards the Foundation Degree A model for the initial engagement of new learners

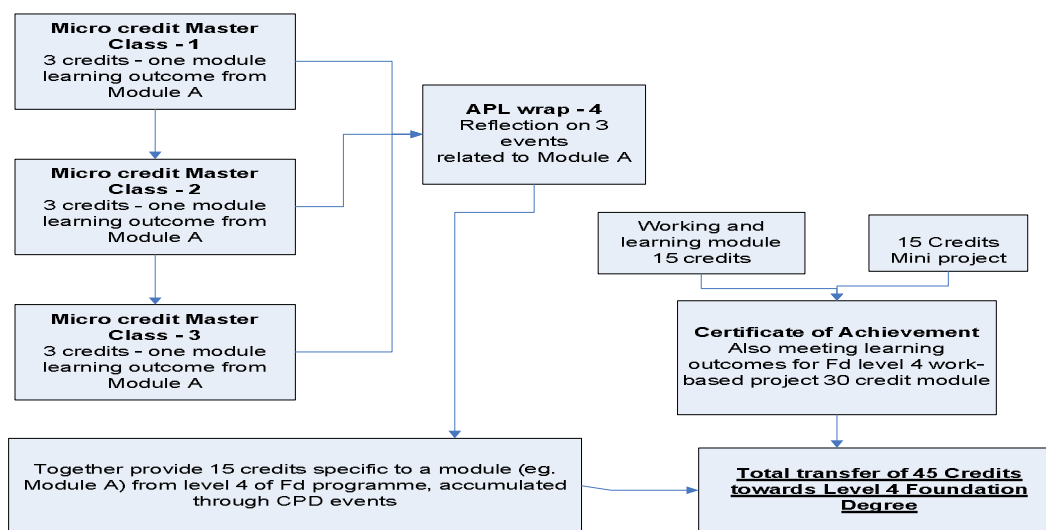


Figure 1

Further options have since been developed so that in the most recent Fd validation opportunities exist for two different Certificates of Achievement at level 4, giving two different routes into the Foundation Degree in applied Professional studies.

Conclusion

The conference discussion session noted that the alignment of higher level learning outcomes and national occupational standards is not a new concept and there is much experience within universities. UVAC (2004) set out some guiding principles, and sponsored further guidance about specific issues of curriculum linkages (Hemsworth 2007) What *is* new is the incremental nature of potential engagement with this model. Concerns about the workload for staff and students, if acknowledged, in the curriculum design phase can be managed, when the issues of proportionality are taken into account – particularly if acknowledged in the development phase. Nor is it intended that learners would obtain a whole FD by this disaggregation method- although it is interesting to note that many at the session felt that this should be a viable option for some learners.

Planning disaggregation requires consideration of assessment strategy and tracking from the outset, with the use of alternative methods of assessment and delivery to achieve the overall learning outcomes, rather than a linear disaggregation along the lines of the learning outcomes themselves.

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