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Comparing Professional and Academic Qualifications as a Route to Institutional Curriculum Change

Chris Garbett, Leeds Beckett University, UK

ABSTRACT

There are many current initiatives concerned with achieving institutional changes to curricula. These include, inter alia, various versions of online learning, distance learning and work-based learning. This paper considers blending academic curricula and qualifications with professional body curricula and qualifications as a possible way of achieving cost-effective curricula change.

The author's home institution currently delivers Academic Qualifications in Facilities Management (FM); a BSc (Hons) and an MSc. The institution also delivers the Professional Qualifications for the relevant professional body, the British Institute of Facilities Management (BIFM), at levels 4, 5 and 6. All qualifications and awards are delivered by web-based distance learning.

This paper analyses the content and assessment of the Professional Qualification and compares the Professional Qualification with the equivalent Academic Qualification. Using both quantitative and qualitative analysis the paper finds that the Professional Qualification is more challenging and more rigorous than the Academic Qualification. The expectations of the learners from the professional body are higher than the expectations of the students from the university.

The implications of this finding are then considered. Given that the Professional Qualification is more challenging and rigorous, could the institutional curricula be changed so that the Professional Qualification could be integrated into an Academic Qualification, thus opening a vocational route for a degree?

The paper concludes with a brief consideration of the financial costs and other implications of such an institutional curricula change.

Keywords: curriculum change; competency; professional; academic credit; costs

Background

Drivers for institutional curriculum change

There are several distinct trends apparent in the worldwide provision of higher education (HE). One significant trend is the rise in the number of students. The world student population is predicted to more than double to 262 million by the year 2025 (Goddard, 2012).

Mass delivery of HE programmes has also entailed rising costs. When HE participation was restricted to an elite, governments could afford to subsidise costs. With increased participation, however, the previous funding model no longer suffices.

"The question of how to pay for education, and in particular how to pay for higher education, is everywhere one of the key issues of the twenty-first century." (Piketty, 2014) Effectively, HE has moved from an exclusive supply-driven model, where students competed for university places, to a more inclusive demand-driven model, where universities now compete for students.

Technological developments have also impacted on HE delivery, especially online delivery and learning. This can be formal web-based distance learning courses or massive open online courses (MOOC).

A further factor affecting the delivery of HE programmes is the increased need to relate academic content to the employability of graduates. Employers express concerns about the employability skills of graduates. "Businesses want to see higher education institutions doing more to improve the business relevance of undergraduate courses (49%) and to help students become job-ready (47%)" (CBI/Pearsons, 2014). UK politicians have also expressed concern about the future shape of HE Qualifications.

This paper looks at existing Professional Qualifications to consider if there is parity between Academic and Professional Qualifications in terms of educational attainment. If there is such parity, could Professional Qualifications be adapted into Academic Qualifications and, if so, what are the financial and other implications of such adaptation?

Methodology

The paper uses a case study approach to compare the delivery of competency-based Professional Qualification with an equivalent academic award.

A case study is used utilising actual data drawn from the structures of both the Professional and the Academic Qualifications constituting “an empirical inquiry that investigates a contemporary phenomenon within its real-life context” (Yin, 2009).

The comparative analysis is undertaken by quantitative and qualitative comparison of a Level 6 Professional Qualification, the Level 6 Diploma of the British Institute of Facilities Management (BIFM); and an equivalent Academic Qualification, the BSc in Facilities Management.

Quantitative analysis

The quantitative analysis is undertaken by considering the stated learning outcomes (LO) and assessment criteria (AC) of the two qualifications.

Qualitative analysis

The quantitative analysis is supplemented by a qualitative analysis through a word cloud, using Wordle analysis of relevant descriptors in the two programmes. The use of Wordle as a supplementary research tool is a relatively new tool which can be used in conjunction with other methods. “Word clouds can be a useful tool for preliminary analysis and for validation of previous findings. However, Wordle is an adjunct tool and we do not recommend that this method be used as a stand-alone research tool comparable to traditional content analysis methods” (McNaught& Lam, 2010). In view of the above caveat, the word cloud representation is supplementary to the quantitative analysis undertaken.

The qualifications

The author's home University offers a range of professional, vocational and academic courses in Facilities Management (FM). All courses are web-based distance learning courses.

For the professional qualifications of the BIFM, students select from a menu of units to build up to the award, certificate or diploma in FM at either level 4, 5 or 6.

The University also offers the following academic courses: a top-up BSc FM at level 6 and an MSc FM at level 7.

Professional Qualifications British Institute of Facilities Management (BIFM)

BIFM have developed their own Professional Qualifications at levels 4, 5, 6, and 7. With guidance from tutors, learners self-select which level is appropriate for them.

The BIFM qualifications are accredited by the Qualification Credit Framework (QCF). The QCF equates directly to Quality Assurance Agency (QAA) Framework for Higher Education Qualifications (FHEQ).

At each level of the BIFM qualifications, there are three grades of qualification: the award, the certificate and the diploma. At levels 4 and 5, the award is 12 credits, the certificate is 24 credits and the diploma is 48 credits. At level 6, the award is 10 credits, the certificate is 30 credits and the diploma is 60 credits.

Qualifications are made up from a menu of mandatory and optional units.

Learners initially enroll for two years. There are no fixed entry or exit dates, and learners can work at their own pace and have flexibility in selecting optional units.

The Academic Qualifications

The University also offers the following Academic Qualifications:

MSc Facilities Management 180 credit points at level 7.

A ‘top-up’ BSc (Hons) Facilities Management 120 credit points at level 6. Entrants to this degree already have relevant level 5 qualifications, professional qualifications or relevant experience. Figure 1 shows the diagrammatic structure of the BSc (Hons) Facilities Management.

BSc (Hons) Facilities Management					
Cohort 1			Cohort 2		
level 6	Oct - Jan Semester One	Financial & Commercial Management	Facilities & Maintenance Management	*	*
	Feb - June Semester Two	WBL - NLC	FM Professional Practice	WBL - NLC	FM Professional Practice
	Oct - Jan Semester One	Major Project (Capstone)		Financial & Commercial Management	Facilities & Maintenance Management
	Feb - June Semester Two	*	*	Major Project (Capstone)	

Figure 1 BSc (Hons) FM course structure

The BSc FM comprises 6 x 20 credit modules. Three modules, i.e. 60 credits, equates to an ordinary, non-honours degree.

In terms of credit, therefore, there is a direct comparison between the BIFM professional diploma (60 credit points level 6) and the BSc Facilities Management, also 60 credit points level 6.

This paper will now use different metrics to further compare the two qualifications.

Quantitative analysis and comparison of the professional and academic qualifications

This quantitative analysis is undertaken by:

- comparing the professional units and the academic modules
- comparing the LOs and ACs for both the Professional and Academic Qualifications

Comparing units and modules

LOs for the BSc FM

The BSc FM comprises 3 x 20 credit modules. University policy dictates that modules should have no more than four LOs per module. Three modules, therefore, equates to no more than 12 LOs.

LOs for the BIFM Level 6 Diploma

The minimum requirement to achieve the level 6 BIFM Diploma is nine units comprising five mandatory units and four optional units. The units vary between ten credits per unit to four credits per unit.

LOs for the BIFM units are specified in the unit specification. These LOs are then sub-divided into assessment criteria (AC). The structure of the BIFM units is shown in Figure 2. This figure shows the unit specification for a typical BIFM level 6 unit, unit 6.01 bearing 10 credits. The unit is divided into five LOs. Each LO is sub-divided into a number of ACs.

Unit FM6.01 Strategic facilities management

(At level 6, the evidence provided by learners to confirm that they meet the AC must relate to organisations where they have worked or where they are working. Where appropriate, the evidence should show that the learners have been able to take into account relevant theories and methods addressed by the BIFM qualifications at levels 5 and 4.)

Aim of unit:

This unit enables learners to understand the influences and drivers of facilities management, how to market and promote facilities management both within and outside own organisation, the importance of innovation in facilities management and how to apply development in facilities management within an organisation.

Title:	Strategic facilities management
Level:	6
Credit value:	10
Learning outcomes A learner when awarded credit for this unit will:	Assessment criteria Assessment of this learning outcome will require a learner to demonstrate that they can:
1. Understand the influences and drivers that can affect the strategy and direction of facilities management.	1.1 Analyse current trends and directions in facilities management and the key drivers for the industry. 1.2 Analyse the implications of wider political agendas and the ways in which the Global, European and UK economic contexts can impact on the direction of facilities management. 1.3 Evaluate the impact of business and marketing pressures on facilities management strategy and direction. 1.4 Critically evaluate and modify facilities management strategy to reflect changing internal and external drivers.
2. Understand how to market and promote facilities management within an organisation, to clients and end-users.	2.1 Develop and/or review strategies for raising the profile of facilities management in a positive way both within and outside an organisation. 2.2 Identify and evaluate new opportunities for business development. 2.3 Identify and evaluate new business markets and opportunities for extending facilities management within an organisation.
3. Understand the importance of embedding innovation in facilities management.	3.1 Critically review the strategic and operational aspects of service innovation and its relevance to own or client organisation. 3.2 Evaluate the effectiveness of embedding innovation within facilities management services and its impact on services provided. 3.3 Using a business case framework, develop a model of service innovation which can demonstrate the added value and contribution of facilities management to an organisation.
4. Be able to apply innovative tools and techniques in the facilities management industry.	4.1 Critically review the latest innovations, tools and techniques developed nationally and internationally which can be used in facilities management. 4.2 Select and experiment with one new development, tool or technique. 4.3 Analyse the success or failure of the experiment.
5. Be able to establish a creative problem-solving culture within an organisation.	5.1 Develop strategies for instilling and embedding greater degrees of creativity in problem-solving within an organisation. 5.2 Establish a culture of adopting good practice in facilities management within an organisation.
Unit expiry date	31 st January 2015
Unit Reference Number	T/601/1851
Details of the relationship between the unit and other standards or curricula (if appropriate)	BIFM Competence 1: The Business Organisation and Competence 20: Facilities Management Trends and Developments

Figure 2 BIFM Unit specification (BIFM, n.d.)

Quantitative comparison of LOs and ACs

University modules are limited to two points of assessment per module. Three modules, therefore, is six points of assessment. The minimum mark to achieve a pass in a university module is 40%.

The nine BIFM units require *at least* nine points of assessment (some units require two points of assessment). Word length per assessment is based on the amount of credits.

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The BIFM assessments are not graded, but to pass the assessment, 100% of LO and AC have to be satisfied. The following figure is an extract from the 'Evidence Seen' sheet for a BIFM Unit. All LO and AC have to be satisfied.

Evidence	LO1				LO2			LO3		
	AC1	AC2	AC3	AC4	AC1	AC2	AC3	AC1	AC2	AC3
Learning outcomes: The learner will	Assessment criteria: The learner can									
1. Understand the influences and drivers that can affect the strategy and direction of facilities management.	1.1 Analyse current trends and directions in facilities management and the key drivers for the industry. 1.2 Analyse the implications of wider political agendas and the ways in which the Global, European and UK economic contexts can impact on the direction of facilities management. 1.3 Evaluate the impact of business and marketing pressures on facilities management strategy and direction. 1.4 Critically evaluate and modify facilities management strategy to reflect changing internal and external drivers.									
2. Understand how to market and promote facilities management within an organisation, to clients and end-users.	2.1 Develop and/or review strategies for raising the profile of facilities management in a positive way both within and outside an organisation. 2.2 Identify and evaluate new opportunities for business development. 2.3 Identify and evaluate new business markets and opportunities for extending facilities management within an organisation.									
3. Understand the importance of embedding innovation in facilities management.	3.1 Critically review the strategic and operational aspects of service innovation and its relevance to own or client organisation. 3.2 Evaluate the effectiveness of embedding innovation within facilities management services and its impact on services provided. 3.3 Using a business case framework, develop a model of service innovation which can demonstrate the added value and contribution of facilities management to an organisation.									

Figure 3 Extract from BIFM Evidence Seen sheet (truncated for reasons of space) (BIFM, n.d.)

Having identified the requirements for LO, AC and assignments for both the Academic and the Professional Qualifications, for ease of comparison, these can now be shown in a table.

The chart in Figure 4 summarises the quantitative comparison between the BSc FM and the BIFM Level 6 Diploma.

BSc FM				BIFM L6 Diploma				
60 Credits (Non-Honours Award)				60 Credits				
Modules	4			Units (min)	9			
Points of Assessment								
Module Reference	No.	Word Length	Learning Outcomes	Unit Reference	No.	Word Length	Credits	Learning Outcomes
Financial & Commercial Management	2	2,000 words + 1,000 words & spreadsheet	4	6.01 Strategic FM	1	10,000	10	5
Facilities & Maintenance Management	1	3 hr. Exam	4	6.02 FM Governance & Risk	2	8,000 (total)	8	6
Work-Based Learning	2	Portfolio & Reflection 2,000 words	4	6.03 Quality Management & Customer Service	1	6,000	6	4
FM Professional Practice	2	Group wiki 1,500 words & PowerPoint Presentation 2,000 words	4	6.04 Financial Management in FM	1	6,000	6	5
				6.05 Strategic FM Support Services	1	4,000	4	4
				6.06 Compliance with Organisational H&S and Impact on FM	1	6,000	6	3
				6.09 Developing Strategic Relationships in FM	1	6,000	6	6
				6.11 Corporate Responsibility & Sustainable FM	1	6,000	6	4
				6.13 Property Management & Maintenance Strategy for FM	1	8,000	8	6
Total	7	9,500 words + spreadsheet +exam	16	Total	10	60,000 words	60	43

Figure 4 Summary of quantitative analysis

From the quantitative analysis, it is evident that the BIFM Level 6 Diploma has more rigorous requirements than the equivalent BSc FM in terms of numbers of LO and AC to be satisfied, and in terms of the overall assessment requirements.

Having considered the quantitative analysis, a qualitative analysis of the two qualifications is undertaken.

Qualitative analysis and comparison of the professional and academic qualifications

Textual analysis

The LOs from the BSc FM Module Templates (MATS) and the LOs from BIFM 'Declaration of Evidence Seen Sheets' were analysed using an online text analyser.

For convenience, both sets of LOs were adapted. Commonly appearing words such as *student*, *facilities*, *management*, *services*, *aims* were removed from each set. The results of the analysis are shown below:

Frequency and top words :

Word	Occurrences	Frequency	Rank
professional	7	2.6%	1
learning	4	1.5%	2
requirements	4	1.5%	2
decisions	4	1.5%	2
practice	4	1.5%	2
analyse	4	1.5%	2
able	4	1.5%	2
financial	4	1.5%	2
organisation	3	1.1%	3
factors	3	1.1%	3

Figure 5 Result of textual analysis BSc FM**Frequency and top words :**

Word	Occurrences	Frequency	Rank
evaluate	55	3.6%	1
able	35	2.3%	2
review	33	2.2%	3
develop	25	1.6%	4
analyse	25	1.6%	4
within	22	1.4%	5
strategy	21	1.4%	5
stakeholders	20	1.3%	6
business	20	1.3%	6
strategies	18	1.2%	7

Figure 6 Result of textual analysis of BIFM Level 6 Diploma**Textual analysis results**

Interestingly, high-level analytic verbs such as *evaluate*, *review*, *develop* and *analyse* were predominant in the BIFM qualification specifications. The BSc analysis showed a predominance of nouns such as *professional*, *learning* and *requirements*.

The final analysis again is a comparison of the textual content of the LOs documents, this time shown as a visual comparison.



A word cloud centered around the word "EVALUATE". The word "EVALUATE" is the largest and most prominent. Other large words include "ANALYSE", "ABLE", "BUSINESS", "DEVELOP", "REVIEW", "STRATEGIES", "STAKEHOLDERS", "STRATEGY", "PROPERTY", "SAFETY", "SUPPORT", "FINANCIAL", "FUNCTION", "IMPACT", "EFFECTIVENESS", "RISK", "WITHIN", "SYSTEMS", "CRITICALLY", "CORPORATE", "RESPONSIBILITIES", "HEALTH", and "IDENTIFY". The words are arranged in a circular pattern around the central word, with varying sizes and orientations.

The preponderance of the verbs *analyse* and *evaluate* corresponds to the higher level of the cognitive process according to Bloom's Taxonomy, as revised by Anderson and Krathwohl (Anderson & Krathwohl, 2001).

In several respects, the Professional Qualifications are superior to the Academic Qualifications.

Implications

Quality implications

The preceding analyses show that properly accredited Professional Qualifications can have the same (or greater) rigour and depth as equivalent Academic Qualifications. This opens up the possibility of HEIs accrediting Professional Qualifications. A learner who completes the BIFM Level 6 Diploma, delivered by the HEI, has achieved learning at least equivalent, if not superior to, the top-up BSc. In that case there would be a convincing argument for the learner to be awarded an unclassified BSc or proceed to the BSc (Hons) with advanced standing. The principle of awarding academic credit for non-academic qualifications is already established in Europe in accordance with the Bologna and Eurydice Processes (Network, 2012).

European practice

European countries are already, to a greater or lesser extent, allowing credits from other programmes against academic programmes. This opens up the possibility of greater collaboration between HE and industry. The students will be learning whilst in the workplace. This further opens the possibility of a curricula innovation for a new format of degree, utilising Professional Qualifications as a route for a 'technical degree'.

Cost implications

Institutional cost savings

As previously stated, for the case study, both the Academic and Professional Qualifications are delivered by web-based distance learning. Detailed cost analyses of web-based distance learning programmes (Garbett, 2011; Bartolci-Zlomislac & Bates, 1999; Laurillard, 2007) identify significant cost savings in delivering off-campus courses compared to face-to-face delivery. These savings particularly arise from the reduction in, or elimination of, fixed costs such as accommodation costs, and in the reduced amount of hours spent in delivering face-to-face lectures. An off-campus technical degree, utilising existing professional body competencies, could be delivered for a fraction of the cost of a traditional face-to-face degree. As shown above, such a competency-based technical degree would have at least the same rigour as an equivalent academic degree.

Individual student cost savings

The student clearly benefits. The student is earning whilst learning. At no, or negligible, additional cost they gain the additional prestige of academic recognition and an academic award, for their professional qualification. With multiple entry and exit points and open submission arrangements, the student has complete flexibility in arranging their learning to suit their own situations. Despite the initial two-year registration period, students may re-enrol at any time and pick up their learning at a later date. The web-based delivery pattern also means that students can study anywhere in the world. If a student is redeployed to another city, or another country, they can still continue with their studies.

Implications for BIFM

BIFM qualifications are already of high prestige within the profession. Recognising the academic merit of these qualifications would further increase that prestige.

Implications for the University

For the University, this merger of Professional and Academic Qualifications increases the range of programmes which can be offered. The flexible timescales and distance learning mode of delivery open a worldwide market opportunity. There is some evidence that this pattern of competency-based delivery is already being implemented.

A small but growing number of educational institutions... are implementing online competency-based programs. Although many are still in nascent stages today, it is becoming clear that online competencies have the potential to create high-quality learning pathways that are affordable, scalable, and tailored to a wide variety of industries. It is likely they will only gain traction and proliferate over time. (Weisse, 2014)

Wider implications

This study has been exclusively concerned with one professional body. There is no need to conclude, however, that the result would be different for any other accredited Professional Qualifications.

Implications for institutional curriculum change

The drivers for change to HEI curricula were identified above, particularly:

- the political necessity to control the soaring costs of Higher Education plus,
- the need to align HE Academic Qualifications with employability and the needs of employers.

For vocational courses, there are opportunities to utilise Professional Qualifications in a number of ways.

Material from the Professional Qualifications can be used to supplement, or replace, material from the academic programmes. Whilst this would be particularly appropriate for part-time students who are employed in the professional area, it would also be useful for full-time students to enable those students to see the direct relevance of their learning to professional practice.

Within programmes, curricula change could also be effected by replacing taught modules with units from the Professional Qualification. Accepting that the units have the same credit as the academic awards, some taught modules could be completely replaced with an appropriate number of credits from the Professional Qualification. If these units are delivered by distance learning (DL), this would give a new emphasis to the concept of 'Blended Learning'. The students take a mix of taught and face-to-face modules and DL units. This would achieve cost saving at the Institution because of the reduced need for expensive teaching space. It would also encourage the students to accept more autonomy for their own learning. Instead of being passive recipients of taught material, they would have to self-direct their learning. This drive towards greater independence of learning has the added advantage of progressing the student along the Pedagogy-Andragogy-Heutagogy continuum.

Institutional change of curricula may be further strengthened by redesigning the whole programme. Traditional 3-year or 4-year sandwich courses could be redesigned so that students spend a greater part of their time out of the classroom and in practice.

It is anticipated that there could be some resistance to these changes. Resistance could come from academic staff who may fear a dilution of 'academic' content. Students may resist the replacement of taught material with DL material, especially if it is seen as merely a cost-cutting measure. Any cost savings would have to be distributed between the student and the institution and the benefits made clear to the student.

Biography

Chris Garbett is former Principal Lecturer and Director of the Centre For Facilities Management at Leeds Beckett University. He has written and lectured extensively on innovation in education.

Now retired, he lives on a canal boat in the Midlands with his lovely wife and a collie dog.

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