Periodic Review of the School of Construction Management and Engineering

Introduction

1. An internal review of programmes in the School of Construction Management and Engineering was held on 26 and 27 November 2013. The members of the panel were:
   - Professor Richard Frazier, Professor of Food Science, School of Chemistry, Food and Pharmacy (chair)
   - Professor Naomi Brookes, Leeds University (external member, subject specialist)
   - Mr Tony Burton, Senior Partner of Gardner and Theobald, member of RICS Regulatory Board, Deputy Chairman of the Construction Industry Council (external member, industry specialist)
   - Mr Daniel Grant, School of Chemistry, Food and Pharmacy (internal member)
   - Mr John Kelsey, University College London (external member, subject specialist)
   - Mr Florian Marcus, BA Politics and International Relations (student member)
   - Dr Cathy Tissot, Institute of Education (internal member)
   - Mrs Breanna Edwards, Centre for Quality Support and Development (secretary)

2. The panel met the following:
   a) Professor Stuart Green, Head of School
   b) Dr Milan Radosavljevic, School Director of Teaching and Learning
   c) Professor Will Hughes, Director of Postgraduate Programmes, Director of MSc Construction Management
   d) Dr Tabarak Ballal, Director of Undergraduate Programmes
   e) Mrs Gerri Excell, Teaching and Learning Manager
   f) Mrs Christina Duckett, Admissions Tutor, Lecturer
   g) Mr Stephen Mika, Senior Tutor
   h) Dr Libby Schweber, Associate Professor and School Director of Teaching and Learning effective 1 January 2014
   i) Mrs Sue Shen, Administrator for MSc D&MSBE
   j) Mrs Lucia Gwinell, Administrator MSc Renewable Energy & Technologies
   k) Dr Carol Jewell, Deputy Director MSc Construction Management
   l) Mrs Stephanie Wilkinson, Administrator MSc Project Management & MSc Construction Cost Management
   m) Ms Suzie Mellor, Undergraduate Administrator
   n) Ms Stephanie Weller, Research Manager
   o) Mrs Nicola Tuson, Coursework Support Officer
The panel met both students and alumni who represented the following degree programmes:

- MSc Project Management
- MSc DMSBE
- MSc Construction Management
- MSc Renewable Energy
- BSc Quantity Surveying
- BSc Construction Management & Surveying
- BSc Building Surveying
- BSc Construction Management

The Panel spoke via conference call with employers from:

- Eurovia Group
- Henry Riley LLP

General observations

The panel was warmly welcomed and given access to a range of teaching and assessment materials. The panel met with a wide range of staff and wished to express its gratitude to all those who participated in the review process.

The panel welcomed the involvement of current and former students who gave a very positive endorsement of the programmes under review and the Panel wished to thank them for their input. Students spoke highly of individual members of the lecturing team and cited examples of inspiring teaching; often this extended beyond the formal academic course and was further appreciated by students once they entered employment.

The panel was particularly impressed by the mutual respect and appreciation between students, alumni, academics and support staff. There is a robust sense of engagement and commitment of staff to teaching and learning which is fostered by strong leadership of the School.

The panel noted the effective leadership of the School and the senior management team’s ability to address challenges as they arise as well as supporting the development of innovative teaching and learning practices such as the collaborative project competition with the Football Gambia charitable organisation to design a
sustainable primary school, housing 150 children, a community centre, nursery and kitchen garden for a rural village in the Gambia [good practice a].

7 The Panel was tasked by the University Board for Teaching and Learning to give full consideration to the School's response to the National Student Survey results for assessment and feedback and organisation and management of programmes. The Panel has addressed issues relating to these particular areas throughout the report and paragraphs 13, 14, 17-20 and 22 are most relevant.

Academic standards of the programmes

Educational aims of the provision and the learning outcomes

8 The panel was provided with evidence in the form of programme specifications, module descriptions, student handbooks, external examiners’ reports and student work. It also held a number of meetings with staff and students and read a small number of examples of student work.

9 Generally, the programme aims were clear and outcomes of the programmes were achieved by students. The School should continue its review of postgraduate programmes, including its review of current programme aims and learning outcomes, to ensure their clarity, consistency and relevant.

10 Students recognised their degrees are valued by employers; however the School should consider how they can communicate effectively the value of individual components. The panel understood that a review of the postgraduate provision in the School would give consideration to communication of programme aims and outcomes and the School should also give consideration in respect to undergraduate programmes.

Curricula and assessment

11 The curricula were demonstrably current particularly in relation to the articulation of programmes to industry, and the panel noted as good practice the ability of the School to remain proactive in adapting and advancing their curricula [good practice b].

12 The panel concluded that the School would benefit from a more holistic approach in reviewing provision at the modular level. A harmonisation of module codes where currently different codes are used for modules with the same content and an exploration of the possible combination of 10 credit modules into 20 credit modules where possible having regard to staffing, accreditation, option flexibility or other practical matters [advisable recommendation a].

13 The panel was informed of a wide range of good practice within programmes relating to assessment and feedback, including the card system which is an informal, in-lecture quiz used to determine students’ comprehension of topics and detailed assessment criteria for coursework. However, these examples of individual best practice were not being widely disseminated or shared to become systemic within the School. The Panel did note that the School was working towards more effective methods of dissemination of good practice; however current students remain aware of inconsistent practice within the School. A lack of consistency in feedback provided to students was also highlighted in external examiners’ reports.

14 The panel agreed that an overarching assessment and feedback strategy be developed which should include:
a) a clear endorsement from the Senior team regarding the importance of adhering to University policy in relation to staff providing students with a set date by which they will receive formal feedback on summative assessments. The panel noted that, currently, not all academics were providing students with this information.

b) a thorough review and possible redesign of the feedback forms, with particular attention paid to the undergraduate feedback form;

c) a consistent approach to clear communication of assessment criteria and marking criteria to students;

d) effective communication to students about the transferable skills gained through particular types of assessment i.e. group work;

e) mechanisms for sharing and adopting best practice within the School;

f) clear guidelines about the expectation of the quality of summative feedback and the effectiveness of feedback in providing students with the necessary tools to improve upon their understanding of the subject; and

g) clear guidance on the expectation of staff to provide scheduled formative feedback time to students.

[Advisable recommendation b]

15 The panel was impressed with the standardisation of assessment in relation to the use of Turnitin and noted this as an area of good practice [good practice c].

16 The Panel was informed that the School does not have a requirement that staff use the University’s step marking tool in the first-class range and distinction range (70-100). Following discussions with staff and a thorough review of the assessments provided, the Panel concluded that detailed assessment criteria and the full range of marks were being used to evaluate assessment, which is within the scope of University guidance on step marking.

Use of student management information

17 The School has undergone a great deal of change over the last 2-3 years specifically in relation to the design of programmes, teaching and learning provision for students and development opportunities for staff. The School is proactive in responding to issues raised through the Student-Staff Liaison Committees for example students raised concerns about the ‘bunching’ of assessments. The School responded by mapping out submission dates for assessments on a modular basis for Part 1, Part 2 and Part 3 students. The exercise proved useful both in terms of identifying where there was unreasonable ‘bunching’ of assessments as well as providing an overview of assessment submission dates to students [good practice d]. The panel recognised this as an area of good practice but also recommended that the tool could be further developed to include the date by which feedback will be provided to students. This would further ensure that the School is adhering to University policy on assessment and feedback by providing specific dates by which feedback will be provided to students.

18 Further developments by the School as a result of student feedback includes: introduction of a diverse range of assessment methods with more emphasis on online quizzes and tests, monitoring of feedback times through the online submission of all coursework, piloting of Blackboard Connect which will provide students with bidirectional communication and rapid SMS feedback, inclusion of the Liaison
Librarian at SSLC meetings, and further development of student-staff partnership initiatives.

The School recognises that further work is needed in order to achieve their goal of raising the NSS results to 80% satisfaction rating in all categories and the senior management of the School are committed to and supportive of this objective. The Panel was satisfied that the School was moving in a positive direction and believed that work put into the development of teaching and learning practices in the School would result in upward trends in the NSS and PTES in due course.

Students are informed of action the School has taken as a result of student feedback through inclusion of ‘house-keeping’ slides which every lecturer must include in at least one lecture per term [good practice e]. In addition, the Head of School attends all Student-Staff Liaison Committee meetings which further foster the atmosphere of mutual respect between students and staff at the most senior levels [good practice f].

Quality of learning opportunities offered by the programmes

Teaching and learning

The Panel noted there was outstanding practice evident in relation to teaching and learning generally but there was a lack of consistency as highlighted in paragraph 13. Therefore the School should ensure that good teaching and learning practice is disseminated more widely and best practice is adopted throughout. The panel recognises that work is already being undertaken in this area, most notably through the organisation of a School annual Best Practice in Teaching and Learning event, the first to be held in February 2014 [good practice g].

The School clearly demonstrated that the teaching staff were able to engage students and were encouraged through the senior management of the School to explore innovation in learning and teaching methods. However, the panel believed that more could be done to support staff in need of targeted support in the areas of teaching, learning, assessment and feedback. Therefore the panel recommends that the School should continue to be responsive to any issues raised by students on module evaluation forms and in SSLCs and provide more formal support mechanisms for staff to further enhance the teaching and learning provision of the School [advisable recommendation c].

The distinction of the School amongst other universities which teach construction management and engineering programmes is their commitment to integration of research into teaching, and the students benefit from this ethos. Lecturers use projects commissioned by industry to teach students. The thread of research pulls industry projects into the classroom and provides students with the opportunity to work on real issues within a project and this positively contributes to the student learning experience.

Students highlighted a number of outstanding lecturers and facilitators of learning and skills development including Roger Flanagan, Will Hughes, Tim Lees and Milan Radosavljevic.

The School encourages and supports innovation by students, notably by supporting the development of the ConstructionChat website and the ConstructionChat Summer School organised jointly by current students (Ashley Davidson and Connor O’Connor, now alumni) [good practice h].
Student admission and progression
26 Admission figures for undergraduate programmes postgraduate programmes indicate a decline although the quality of the students remains consistently good. The severe recession has negatively impacted on undergraduate student numbers sector-wide but numbers are expected to return to traditional levels over the next few years. Postgraduate taught student numbers are holding up well despite the recession particularly in terms of overseas recruitment.

27 The School is working to develop links with local secondary schools to help improve the perception of construction. In addition the School is developing strategic relationships with colleges in order to recruit exceptional students with a non-traditional academic background [good practice i].

Learning resources
28 The School is fortunate to have allocated space for computer labs, a resource/study centre as well as informal space for student use. The School has designed the space to foster collegial cohesiveness between students and staff and have been successful at adapting space to provide technically advanced learning opportunities and the use of the existing space is excellent for independent study. However, there was a lack of suitable formal teaching space which includes computers. Therefore the panel recommends that the University carefully consider its support of the School’s efforts to increase student access to cutting edge software in a format which would accommodate lectures and foster further innovation in teaching and learning [advisable recommendation d]. The panel recognised that the School’s use of available space and investment in leading-edge technology was an area of good practice [good practice j].

29 The School’s management and use of the CAVE (cave automatic virtual environment) facility was effective in supporting students understanding of building design. The CAVE allows students to ‘walk-through’ virtual buildings. The management and use of the CAVE facility to support teaching and learning is highlighted as an area of good practice [good practice k].

Employer engagement
30 The panel concluded from meetings with recent graduates and employers that graduates from Reading are highly employable and employers are very happy with the calibre of graduates. It was evident that the School is producing quality practitioners who rapidly progress to management positions within leading surveying practices and construction companies.

31 Dependant on the modules chosen, some students might not have as many external industry lectures as others. It is therefore recommended that the School advertise (where appropriate) external lectures to all students so they could benefit from these guest lecturers as well [desirable recommendation a].

32 The School enjoys excellent links with industry, but strategic advice on the direction in which the industry is moving was not readily available through the School’s liaison structure. Therefore the panel recommends that the School develop a strategic level board to facilitate the School’s awareness of medium to long-term issues within industry, particularly in light of changes in government regulation [desirable recommendation b].
33 The panel commends the School’s commitment to employability and in particular noted the contribution made by Tim Lees, in his role as Industrial Placement Officer, to appropriately support careers learning through other extra-curricular activities as well as successful efforts to integrate careers learning into programmes.

Enhancement of quality and academic provision

34 As highlighted elsewhere in this report, there are opportunities for staff to further engage in the sharing of good practice and to work together on development opportunities within the School. Students were full of praise for the management of dissertation development at both undergraduate and postgraduate level.

35 The Panel were concerned that some students with registered disabilities were not being provided with the full level of support as required by the University; specifically some students were not provided with lecture notes ahead of scheduled lectures despite this being an element of their learning plan. All staff must adhere to the learning plans provided by the Disability Advisory Service and available through the School’s Disability Representative including providing lecture slides, notes and handouts prior to lectures where this is stipulated [necessary recommendation a]. While there was evidence that many staff were supportive of students with disabilities individually, there was some evidence that there could be a wider understanding of the implications for students with disabilities in their academic work. Therefore the panel suggests that the School should invite the Disability Advisory Service to deliver a School-specific training session on how to support students with disabilities.

Main characteristics of the programmes under review

36 The degree programmes offered by the School at both undergraduate and postgraduate level are interesting programmes which are enhanced by enthusiastic lecturers, innovative technology, and a research agenda based in industry which provides students the unique opportunity to work on current projects in industry. The School was awarded the Athena Swan Silver Award in 2009, subsequently renewed in 2013, which demonstrates the School’s commitment to equality and diversity. The School continues to diversify their cohort of students but was already leading the sector in the percentage of female students enrolled.

Conclusions on innovation and good practice

37 The Panel commends the following as areas where the School has particular strengths:

   a) The effective leadership of the School and the senior management team’s ability to address challenges as they arise as well as supporting the development of innovative teaching and learning practices;

   b) The ability of the School to remain proactive in adapting and advancing their curriculum particularly in relation to industry;

   c) The standardisation of assessment in relation to the use of Turnitin;

   d) The collation of assessments on a modular level with submissions dates provided to students on a termly basis;

   e) Students are informed of action the School has taken as a result of student feedback through inclusion of ‘house-keeping’ slides which every lecturer must include in at least one lecture per term;
f) The Head of School attends all Student-Staff Liaison Committee meetings which further foster the atmosphere of mutual respect between students and staff at the most senior levels;

g) The organisation of a School annual Best Practice in Teaching and Learning event, the first to be held in February 2014;

h) The School supports innovation by students, as exemplified by the support given to establishing ConstructionChat website and summer school;

i) The School are developing strategic relationships with colleges in order to recruit exceptional students with a non-traditional academic background;

j) The School’s use of available space and investment in leading-edge technology was an area of good practice; and

k) The management and use of the CAVE facility to support teaching and learning.

Conclusions on quality and standards

38 The panel is assured of the quality and standards of the programmes that have been reviewed, that the intended learning outcomes of the programmes are being obtained by students, and that the programme specifications are appropriate.

Recommendations

39 The Panel recommends to the Joint Faculty Board for Teaching and Learning for Science and Life Sciences that the degree programmes taught by the School of Construction Management and Engineering should be re-approved to run for a further six years.

40 The report will categorise any issues as follows, in order of priority:

- Those areas where the Review Team believes it is necessary for action to be taken urgently to safeguard the standard of provision;
- Those areas where it is advisable that the issues be addressed as soon as possible.
- Those areas where it is desirable that the issue be addressed over a longer time span.

41 The Panel does not consider that any recommendations must be addressed as a condition of re-approval. However, it would wish to see the necessary recommendation implemented immediately.

The Panel makes the following recommendations to the School:

Necessary

a) All staff must adhere to the learning plans provided by the Disability Advisory Service and available through the School’s Disability Representative including providing lecture slides, notes and hand-outs prior to lectures where this is stipulated.

Advisable

a) A harmonisation of module codes where currently different codes are used for modules with the same content and an exploration of the possible combination
of 10 credit modules into 20 credit modules where possible having regard to staffing, accreditation, option flexibility or other practical matters;

b) An overarching assessment and feedback strategy be developed, which includes:
   
   a. a clear endorsement from the Senior team regarding the importance of adhering to University policy in relation to staff providing students with a set date by which they will receive formal feedback on summative assessments;
   
   b. a thorough review and possible redesign of the feedback forms, with particular attention paid to the undergraduate feedback form;
   
   c. a consistent approach to clear communication of assessment criteria and marking criteria to students;
   
   d. effective communication to students about the transferrable skills gained for particular types of assessment i.e. group work;
   
   e. mechanisms for sharing and adopting best practice within the School;
   
   f. clear guidelines about the expectation of the quality of summative feedback and the effectiveness of feedback in providing students with the necessary tools to improve upon their understanding of the subject; and
   
   g. clear guidance on the expectation of staff to provide scheduled formative feedback time to students.

   c) The School should continue to be responsive to any issues raised by students on module evaluation forms and in SSLCs and provide more formal support mechanisms for staff in order to further enhance the teaching and learning provision of the School; and

   d) The University should carefully consider its support of the School’s efforts to increase student access to cutting edge software in a format which would accommodate lectures and foster further innovation in teaching and learning.

Desirable

a) The School advertise (where appropriate) external lectures to all students so they could benefit from these guest lecturers as well; and

b) The School develop a strategic level board to facilitate the School’s awareness of medium to long-term issues within industry particularly in light of changes in government regulation.

42 The Panel does not have a recommendation to the Joint Faculty Board for Teaching and Learning for Science and Life Sciences as to whether any proposal(s) for new degree programmes should be approved as this is not applicable.