

UNIVERSITY OF GLASGOW

Academic Standards Committee – Thursday 21 May 2015

Periodic Subject Review: Responses to the Recommendations Arising from the Review of Computing Science held on 13 and 14 February 2014

Mrs Catherine H Omand, Clerk to the Review Panel

Conclusion and recommendations

The Review Panel recognised that the School was well established and had a worldwide reputation within the subject area. The Review Panel observed a highly successful, dedicated and hard-working School that aimed to provide the best learning and teaching environment for their students. The Panel was most impressed with the links the School had established with industry and with Secondary Schools and was highly impressed by the quality of the students it had met with. The Panel recognised that, as a medium sized School, it was under pressure to cover a diverse range of teaching and research and therefore the main area for improvement was for the School to establish a clear vision and strategy for growth: what range of activity would best suit the School and what overall target should be set in relation to student population. Strategy would need to be built into the College of Science and Engineering plans for growth and it was therefore important for the School to demonstrate to the College its potential and the benefit this would provide both the College and University. It was recognised that due to the current flux in student numbers, the School may have to initially establish controls to allow its plan to develop and to enable the School to maintain its research excellence.

Recommendations

A number of recommendations have been made, many of which concern areas that the School had itself highlighted for further development in the SER or during discussion. The recommendations directed at the School are to support the School in its reflection and to enhance provision in relation to teaching, learning and assessment. The recommendations interspersed in the preceding report are summarised below. They have been cross-referenced to the paragraphs in the text of the report to which they refer and are **grouped together** by the areas for improvement/enhancement and are **ranked in order of priority**.

Recruitment

Recommendation 1

The Review Panel strongly recommends that the School develops a coherent strategic vision in terms of future growth and range of provision, working with the Head of College, to produce a phased plan as to how to reach its vision. [Paragraph 4.7.2]

For Action: Head of School/Head of College

Response: Head of School

I took over as Head of School in June 2014, after the review recommendations were issued and during a period before the appointment of a new Head of College. I discussed this recommendation with the interim Head of College and produced an initial strategy, based around maintaining overall numbers while increasing recruitment for Rest of the UK and International students. Our strategy also focuses on the development of on-line courses (see present bid to create a Functional Programming MOOC for LTC from Singer and Vanderbauwhede) and the development of our TNE activities – expanding from Singapore to support the Malaysian campus plans. This will support an increase of two members of staff per year for the next 3-4 years so that we match the growth across the Russel group in Computing. We have not expanded the strategy in a more detailed manner until the new University strategy and the Teaching strategy documents have been published. The College template for the University Workload model is also relevant here given our tendency to over-assess. I have participated in consultation events across all these initiatives and am a member of the Workload Modelling Board.

Response: Head of College

The School has a clearly articulated strategic plan detailing planned growth in academic staff by 13 FTE by financial year 2019, making the School more competitive with other top UK computer science departments and enabling interdisciplinary activity in Big Data, Smart Cities, National Resilience, Climate Change on Critical infrastructures, etc. The planned expansion is justified on the basis of (a) sustainable research growth, (b) an increase in RUK and international student recruitment, (c) an appropriate student-staff ratio, (d) and continued engagement in transnational education (TNE). Two additional academic posts (at SL) have been included in the 2015-2016 budget round.

Recommendation 2

The Panel recommends that the College considers the space limitations currently experienced by the School as a result of the loss of previous laboratory space in the Boyd Orr Building and gives consideration to identifying and developing additional accommodation for current as well as future provision. [Paragraph 4.7.2]

For Action: Head of College

For information: Head of School

Response: Head of College

Lack of space is a College-wide issue. Interim solutions are being sought through ongoing discussions with E&B. However, the campus development plans aim to alleviate this in the medium to long term.

Response: Head of School

I have had repeated meetings with Estates and Buildings on this issue but have not made any progress as yet. The availability of additional space in the Boyd Orr or elsewhere on campus is closely linked to the redevelopment plan. We can gain space when others free up their existing usage. In the interim we have stop-gap measures in place but both our research income and teaching are limited by space constraints. At the most recent meeting (last week) we were given limited assurances that we might be able to obtain additional space on level 7 of the Boyd Orr to also house a business incubator to support many of our students engaged in spin-out companies but similar agreements have been abandoned at short notice over the last nine months. Ann Allan kindly provided a staff meeting with an

overview of present planning, to reduce some of the uncertainty and to support more strategic discussion on the impact for teaching.

Recommendation 3

The Review Panel recommends that the School considers its approach to teaching and how it will maintain quality of support provided to students at a different operative scale, particularly as staff will be under additional pressure from the Singapore intake. [Paragraph 4.7.1]

For Action: Head of School

Response:

This is a complex topic – especially given recent changes in TNE agreements with SIT, Singapore. In the future, it is likely that we will teach new joint degrees with a totally different basis than our present offering. We also have highly volatile resource implication associated with future provision in Penang and in China. In the meantime, I have focused on maximising student support through strategic alliances. In particular, I have worked with Nathalie Sheridan in SLS to ensure we make best use of the help they offer. As an immediate example, she and I have worked with the students through our student society (GUTS) to develop a programme of events aimed at reducing stress in staff and students over the exam period – which seems to have had a significant impact across the operative scale – further details are available on:

<http://www.gla.ac.uk/schools/computing/studentstaff/informationforstudents/stressbusters/>

Learning and teaching resources

Recommendation 4

The Review Panel recommends that the College reviews the effectiveness of current administrative and technical support arrangements for the School and where appropriate, takes action to provide more effective support. [Paragraph 6.8]

For Action: Head of College

For information: Head of School

Response:

Provision has been made in the College Plan for the introduction of additional staff in support of the TRM process and for a Teaching Administrator, possibly to be shared between Physics & Astronomy and Chemistry. Confirmation of these posts will follow completion of the current planning and budgeting round. However, the consultation process regarding realignment of support staff structures with the School has continued. The additional resource, along with a reorganisation of the support staff structures, is aimed at providing an enhanced level of support for learning and teaching.

In furtherance of the University's TRM project, the College has been progressing a phased implementation for research support structures in line with the other Colleges and University Services.

Recommendation 5

The Review Panel recommends that the College, School and IT Services should discuss developing a sustainable upgrading model that will secure appropriate PC facilities with adequate storage capacity, higher specifications and on a shorter replacement cycle for Computing Science laboratories. [Paragraph 6.6]

For Action: Head of College

For information: Head of School, Director of IT Services

Response:

A Working Group has been established by IPSC. This will allow the effectiveness of current student machine specification and replacement cycles to be examined in order to facilitate the introduction of improvements. Members of the IT Operations Group represent the College on this Working Group.

Assessment

Recommendation 6

The Review Panel recommends that the School reviews both the scale and timing of assessments, including examinations, to ensure the assessment load on staff and students is appropriate and optimally phased. [Paragraph 4.5.3]

For Action: Head of School

Response:

Following this review we published a survey to all our students, asking them for their opinion of the assessments they had undertaken during the year. We collated the responses and provided these to the lecturers for each course. We also spoke to all staff at a staff meeting to suggest alternatives for assessment and to request that they be aware of over-assessment. Whereas we had some complaints from students during our staff-student meetings about the assessments, we have not had any this year, which suggests that our intervention has indeed helped this situation.

With respect to timing, this is a difficult issue to address since Computing Science is a skill-based subject and students have to master a certain level of skill before they can tackle any meaningful assessment. In terms of easing staff load we have encouraged staff to consider mechanisms for making assessment more efficient. One lecturer now grades his course assessment automatically, with code that manages to provide feedback as well as assessing the code. Some have also moved towards multiple choice class tests, which eases the assessment load for the lecturer too.

Feedback

Recommendation 7

Review Panel recommends that the School puts in place measures to ensure the consistency of feedback to students on assignments both in relation to timescale and quality in accordance with the University's Assessment Policy. [Paragraph 4.5.4]

For Action: Head of School

Response:

Some years ago we instituted a coursework cover sheet which must be used with all coursework issued to students. As a follow up to this recommendation we included some extra fields on this, which must be completed by the lecturer including: who will mark this (lecturer/tutor/other), what kind of feedback will be provided (oral/written/both), will the coursework be discussed in class, will the feedback be generic (check boxes on a checklist) or individual. There is also a space for individual feedback notes.

Curriculum Design

Recommendation 8

The Review Panel recommends that GTAs and students are made more aware of consultation processes and the mechanisms through which they can contribute to these, to encourage more direct engagement from the students. [Paragraph 4.6.2]

For Action: Head of School

Response:

We have created a handbook for our GTAs which provides more information to them about all processes in the school. The Head of School meets each semester with the GTAs – to identify potential concerns. PDRAs and PhD students are now for the first time fully represented on the School management committee and are encouraged to raise any concerns there.

Intended Learning Outcomes (ILOs)

Recommendation 9

The Review Panel recommends the School and the Learning and Teaching Centre Academic Development Unit work together to continue to develop ILOs that appropriately reflect the distinctive nature of different programmes even when there are common elements. The School should also be supported in developing effective mechanisms to ensure that the mapping of these ILOs onto assessment type is clearly communicated to students. [Paragraph 4.4]

For Action: Head of School and Director of the Learning and Teaching Centre

Response: Head of School

The ILOs are available to students from the course catalog and a link to this is provided on the Moodle page for the course. I met with Jane MacKenzie, Head of Academic Development and discussed how we can meaningfully refine our programme ILOs so that the distinctive nature of each programme is made clearer. She will take this work forward with Head of Teaching, Quintin Cutts, with a view to submitting programme changes for scrutiny early in session 15/16 so that they are in place for 16/17.

We believe that in a skill-based subject such as Computing Science, providing students with overly detailed mappings with respect to assessment type is counterproductive, encouraging a strategic approach to assessment. However, the PSR stressed to us the need for a fresh approach and these will be worked on alongside the revision of Programme ILOs by Quintin Cutts in collaboration with Jane MacKenzie.

Response: Learning and Teaching Centre

Jane Mackenzie met with Chris Johnston, Head of School and discussed the need to make different programme ILOs distinct from each other in order to signal to students what they can expect to learn and be able to do by the end of a programme.

It was agreed that the School Head of Teaching, Quintin Cutts and Jane would get together on revising programme ILOs to reflect the distinct nature of programmes with a view to submitting programme changes for scrutiny early in session 15/16 so that they are in place for 16/17. A necessary part of these revisions would be a careful mapping of ILOs to assessments in order to ensure programmes are aligned.

Quality of learning opportunities

Recommendation 10

The Review Panel recommends the School builds on its existing activities for sharing good practice in teaching across the School to encourage further developments of teaching, engaging both staff and students with the process. [Paragraph 5.2]

For Action: Head of School

Response:

We already have numerous mechanisms in place to support the exchange of good practice – for example, I have worked with Lesley Cumming to coordinate our mentoring processes both with University policy and to exploit new opportunities to help mid-careers staff. Since taking over as Head of School, I have supported a number of student led initiatives to improve broader aspects of teaching practice – most noticeably a series of hackathons. These events last continuously for 48-60 hours programming through the night. Local and international companies set challenges that student teams must complete to win prizes. The logistics are enormous – ranging from obvious security concerns through to feeding the participants for 48+ hours. The benefits are equally obvious – a first year team won one of the initial events; they get to meet their peers in other years. We hosted the largest of these events anywhere in the world in December 2014. These are important for teaching because staff get to see what students can really do, in an informal non-assessed environment – also learning where we can improve our support to them. We should stress that these are voluntary events. Staff and students choose to give up their weekends. A second area of

development is the submission by Dr Helen Purchase to the latest round of the Learning and Teaching Development fund, GUIT: Building a 'Best practice' online community. We already have elements of this within the School and the proposal is to systematically extend this to teaching practice across the University.

Recommendation 11

The Review Panel recommends that the School consult the Recruitment and International Office and the Dean of International Mobility in revising their approach to student mobility [Paragraph 8.4]

For Action: Head of School

**For information: Director of Recruitment and International Office/
Dean of International Mobility**

Response:

Our Exchange Coordinator has worked hard to make mobility a more attractive and accessible option to our students. Our Software Engineering coordinator has also developed a plan for our Software Engineering students to spend a year in industry between their third and fourth years, and this has been agreed by College and the Senior Adviser. I have supported a number of initiatives in the area of International Mobility but I also need to stress the interactions between this recommendation and the previous proposals, as a new Head of School I have chosen to prioritise other areas at least in the short term.

Student support

Recommendation 12

The Panel recommends the information on timetabling and room booking problems highlighted in paragraph 4.7.3 be drawn to the attention of the Director of Estates and Buildings to inform the ongoing developments in support of improved timetabling and room booking. [Paragraph 4.7.3]

For Action: Director of Estates and Buildings

Response:

It was helpful to have the issues of room bookings highlighted. Over the last three years there has been considerable effort made to improve the timetabling arrangements across the University. A named member of the Central Time Tabling team now works directly with each College and the Schools to timetable and allocate rooms as early as possible; this includes an assessment by the School of class sizes. This minimises the issues of re-allocation of rooms in the period between students accepting places and arriving at the University for the first semester. There is ongoing investment in the teaching space and this always seeks to meet the requirements of disabled students and staff.

Recommendation 13

The Review Panel recommends that the School pays particular attention to the support given to the UGS students in their transition to studying at the University of Glasgow at the end of the first year of operation in Singapore. [Paragraph 4.8.8]

For Action: Head of School

Response:

I went out to Singapore to teach the first module to our first graduating class to talk to the students first hand. I will return twice more in the next three months. I participate in teleconferences with the teaching staff three times each month. I have personally marked both third year and fourth year projects. We are acutely aware of the demands of ensuring both teaching quality and adequate student support in TNE – for instance, we recently helped facilitate a visit by SRS representatives from Glasgow to Singapore. The numbers seeking entry to our programmes continues to rise. It is important also to stress that the University is learning about best practice in this area – TNE imposes highly dynamic demands and student needs with strong cultural and practical concerns shaping good practice.

Recommendation 14

The Review Panel recommends a review of both UG and PG handbooks to ensure the best presentation of information is used consistently in both handbooks. [Paragraph 4.8.2]

For Action: Head of School

For information: Head of School Administration

Response:

These have been extensively revised and checked by both undergraduate and postgraduate year heads. We maintain them as living documents, with the latest up-to-date version available via the Moodle web page.