

BoS 17 April 2024

Wednesday, 17th April 2024 10:15am

Teams | Faculty of Science Board of Studies

Attendees

Attended

Zoe Burke

Andrew Burrows

Duncan Craig (Chair)

Susan Crennell

Charlotte Dodson

Marguerite Hallett (Secretary)

Amanda Harper

Momna Hejmadi

Philip Ingham

Matthew Jones

Eamonn O'Neill

Charareh Pourzand

Fei Qin (FQ)

Tony Shardlow

Gan Shermer

Jeyabal Sivaloganathan

Paul Snow (PS)

Gunnar Traustason

Rhod Woodhouse (RW)

Michael Wright

Did Not Attend

Florin Bisset

Sarah Upendra Chandratreya

Ffion Gould

Tim Rogers

Dmitry Skryabin

David Tsang

Ventsislav Valev

Michael Wilson

Miranda Yafi

1.0 Welcome and Quorum (7568)

The Chair welcomed members, noted apologies and observed that the meeting was quorate.

2.0 Declarations of Interest (7569)

There were no declarations of any potential conflicts of interest.

3.0 Minutes of the Previous Meeting (7570)

The Board approved the minutes of the previous meeting held on 28 February 2024 (Paper 191).

4.0 Matters Arising (7571)

There were no matters arising from the previous minutes.

5.0 Chair's Business (7572)

The Chair did not wish to bring anything to the attention of the Board at this time.

6.0 Report on Research Grants (7573)

The Board received details of awards accepted by Research and Innovation Services from 21 February until 9 April 2024 (Paper 192). The Chair congratulated in particular Dr David Liptrot, Department of Chemistry, for his award of £680,604 from The Royal Society for research into Beyond A Generalisable p-Block Cross-coupling.

7.0 Semester 1 Scaling Report and Errors in Examination Papers (7574)

There were 17 instances of scaling in Semester 1 this year, compared to 11 in Semester 1 last year. The Chair highlighted that when the Board discussed scaling last year it had agreed to reduce the need for scaling. Scaling is available to protect students and uphold academic standards. It should not be a routine activity, more a mitigation activity when something has gone amiss, e.g. in terms of the setting of an assessment or student performance.

2 units were scaled in Chemistry (compared to 0 last year), 1 in Life Sciences (compared to 0 last year), for which the mean mark was not atypical (i.e. below 50.00% or above 69.99%) (SL20024), 11 in Mathematical Sciences* (compared to 7 last year), including 3 units where the mean marks were not atypical (MA12001, MA12005 and MA12012), and 3 in Physics (compared to 0 last year), including 2 units where the mean marks were not atypical (PH20067 and PH30028)**. There were 37 instances of means that were atypical but not scaled (compared to 31 last year).

*NB one scaled assessment component (algebra exam) appears in 3 separate Maths CT umbrella units (MA12001, MA12010 & MA12012) so the number of scaled units is slightly inflated.

**PS highlighted that PH20067 shared an exam (85% weighted), that was deemed overly challenging, with a scaled unit that had an atypical mark (PH20029) (exam weighted 100%). QA35 states that where a unit mean mark falls outside the typical range the Board should consider whether or not scaling is appropriate. The Chair reported that the Faculty Executive Committee had discussed Semester 1 scaling at its meeting yesterday. There is a general consensus across departments that scaling needs to be reviewed.

The Chair proposed to instigate a five point approach to providing some clarity and establishing agreed practice on scaling:

1. The Associate Dean (Education) will prepare some Faculty guidelines, which will be shared and discussed with departments, on when and how to apply scaling.
2. The Board will engage with Registry to ensure that all guidance (e.g. QA35) from Registry is clear and that our own Faculty strategy is in line with both the spirit and letter of the central guidelines.
3. The governance of scaling decisions will be clarified, ensuring that the decision making, as well as the sign off, rests with the Boards of Examiners for Courses (BECs). The Board will also aim to ensure that all such decisions are properly justified and clearly minuted, at both Boards for Examiners for Units (BEUs) and BECs, including the method of scaling used and the decision of where to set the new mean.
4. HoDs will produce an action plan for mitigation against the necessity of scaling.
5. The Board will analyse the justifications provided for scaling decisions to identify learning points from the past and present situation.

The Chair noted that an important point that had already arisen from the discussions thus far is that the timescales for Semester 1 assessment marking are such that moderation becomes more challenging, making the marks falling outside the normal range more likely. This would be raised with Registry, and, if necessary, with the PVC (Education), as part of the discussion to ensure that they were aware of these concerns. The Chair reminded members of the Faculty Assessment and Feedback lead, James Foadi, who is exploring different, including technologically based, methods of assessment and feedback. The Chair suggested that consideration of more rapid, but just as reliable, methods of assessment may help mitigate against the amount of time available for Semester 1 marking.

The Associate Dean (Education) flagged the importance of enabling BEU Chairs to liaise with the Chairs of BECs and BoS regarding possible scaling recommendations.

Each HoD explained the scaling recommendations proposed for each unit to the Board. In these discussions, the following were put forward as possible reasons for scaling:

- New lecturers / lecturers on a unit having to set questions before they have ever taught the unit, e.g. for new CT units.
- Change in teaching delivery / assessment design.
- Covid hangover: Exam technique of students; first in-person exam students have sat at University, e.g. Year 1 cohort or students returning from placement. The current Year 1 cohort would have done exams for A levels, but not for GCSEs (had teacher assessed grades instead), so have not had the same exam run-up as non-Covid affected cohorts.
- Questions set where the answers were expected to be given graphically (to avoid asking students to write down bookwork), which was not expected by students and required more sophisticated skill.
- Scatterplots for a unit differing considerably to the rest of the marks for the cohort.
- Mark distribution, e.g. no student having achieved a 1st class mark.
- Longer term averages on a unit.
- Comparisons with marks of other subcomponents of assessment / assessments.
- Unintended consequences of attempting to fix errors in mechanisms to make assessments more scalable, e.g. auto-marking.

The following were identified as matters for possible consideration as part of scaling discussions:

- Internal and external moderators of assessments cannot review the teaching of a unit.
- Whether scaling (or pre-BEU mark adjustments) should be applied to a particular question, subcomponent of assessment (which may be set by different lecturers), whole assessment or whole unit.
- The extent to which students find certain topics more challenging than others, and associated differences in the averages of questions within an exam paper.
- The appropriateness of having very detailed mark schemes, which make marking adjustments more difficult.
- Trends in graduate outcomes / grade inflation within a department, as highlighted in EARE reports, taking into account credit weighting of unit and effect on degree classification.
- Degree of scaling, where to scale to (e.g. average of the previous 3 years' marks, previous non-scaled average, or just to within the typical range), what the new mean should be.
- Method of scaling, e.g. rotational scaling to protect weaker students who may have been disproportionately adversely affected (i.e. making adjustments that 'correct' the scatterplot / achieve a more balanced distribution), vs. addition or subtraction of marks, or comparing the average of the unit with the mean average that students have had in other units and scaling by half the difference.
- The ability / likelihood of the BEC referring unit marks back to the BEU for reconsideration.
- Appropriateness of high final year project marks; rewarding student effort and achievement of learning outcomes.
- Enabling students to achieve the full range of marks.
- Feedback from External Examiners about generosity (or otherwise) of marking.
- Balancing expected high achievement of final year Integrated Masters students (due to higher OPA thresholds required to progress on such programmes) against M level (Level 7) learning outcomes. Introduction of the 50% M level pass mark in the future.
- Expected mark distributions.
- Unit Convenor feedback, e.g. on student performance / engagement compared to previous years.
- Precedent within a department re. scaling.
- Whether the unit has been scaled and/or had marks in the atypical range over the past 3 years.
- Cohort sizes. It is more difficult to justify not scaling for larger cohorts.
- Units sharing the same exam, e.g. umbrella units.
- Appropriateness of scaling down coursework, given students generally perform better in coursework than exams.
- The likelihood of students achieving higher marks than in previous years through suspected use of GenAI, e.g. in programming units.

- Differences between cohorts in levels of engagement.
- Increasing entry requirements and cohort sizes.

The following were identified as possible mitigation against the necessity of scaling:

- Timescale, communications (including about expectations) and support for staff regarding question setting, to ensure questions set are appropriately challenging. Prioritising setting good exam questions.
- Paying special attention to the moderation of new units and methods of teaching and assessment.
- Ensure key skills (e.g. exam technique) have been taught before exams.
- Running mock exams.
- Having someone more experienced involved earlier on in exam setting to give guidance to a new lecturer.
- More robust follow-up on units that have been scaled.
- Reviewing assessment design, in light of GenAI.

Action: The Board requested that the post-scaled average of 52.63% be checked for SL20024 because if the examination (weighted at 80%) was scaled by 5% it is likely that the post-scaled average would be higher, given the pre-scaled mean of 52.01%.

The Chair sought input from the academic representatives from the other faculties / School. RW (H&SS) reported that while scaling is considered, it has never been applied in the Department for Health. *Secretary's note: 2 units were scaled in Semester 1 in H&SS. H&SS only tend to scale 2-6 times a year.* FQ agreed to report back on scaling in SoM immediately following the meeting.

Secretary's note: FQ reported that when scaling occurs in SoM BEUs it is often done on a unit by unit basis to address the problem that the BEU has perceived for that particular unit. So, there is no one size fits all approach to this. In addition to unit data, the BEU considers contextual information from Unit Convenors and the internal moderator reports. 5 units were scaled in Semester 1 in SoM.

With regard to errors in examination papers, the Chair noted that the number of errors reported this semester represented a continuing decrease over the past 3 years. The errors were relatively minor and there was no significant disadvantage to any of the students arising from these. It looks as though improved examination paper scrutiny is starting to have an effect, which is pleasing.

8.0 Faculty Learning, Teaching and Quality Committee (7575)

The Board noted the minutes of the meeting held on 13 March 2024 (Paper 194).

9.0 Faculty Research and Knowledge Exchange Committee (7576)

The Board noted the minutes of the meeting held on 5 February 2024 (Paper 195).

10.0 Faculty Executive Committee (7577)

The Board noted the minutes of the meeting held on 12 March 2024 (Paper 196).

11.0 Faculty Doctoral Studies Committee (7578)

The Board noted the minutes of the meeting held on 8 February 2024 (Paper 197).

12.0 University Board of Studies (Doctoral) (7579)

The Board noted the minutes of the meeting held on 21 February 2024 (Paper 198).

13.0 Staff Student Liaison Committee meetings (7580)

The Board noted the minutes of the meetings held on:

Department of Life Sciences: Biology and Biochemistry: 6 March 2024 (Paper 199).

Department of Chemistry: 14 February (Paper 200A) and 20 March (Paper 200B) 2024.

Department of Computer Science: 5-16 February (PGT online) (Paper 201A), 12 February (PGT) (Paper 201B) and 21 February (Paper 201C) 2024.

Department of Mathematical Sciences: 21 February 2024 (Paper 202).

Department of Life Sciences: Pharmacy and Pharmacology: 20 February (PGT) (Paper 203A) and 21 February (Paper 203B) 2024.

Department of Physics: 14 February 2024 (Paper 204).

14.0 Any Other Business (7581)

There was none.