

Title:	Consultation on new draft Moderation Procedure
Author/Enquiries:	Emma Hilton Wood, Head of Academic Policy, TLSO (emma.hilton-2@manchester.ac.uk)
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Circulation:	Faculty Vice Deans or Associate Deans for Teaching, Learning and Students
Action Required:	Initiate consultation within Schools/Faculties

Background

1. At the March 2016 meeting of the Teaching and Learning Group, members were asked to consider what needed to be included in guidance on moderation and to bring forward examples of good practice in the area following consultation with colleagues.
2. Based on this feedback, TLG considered the topic again in May 2016, and agreed that the work on developing guidance on moderation should be taken forward by its sub-group on Policy and Guidance, chaired by Fiona Smyth and comprised of representatives from all Faculties.
3. The sub-group took account of the feedback produced as a result of TLG's considerations and also considered a procedural document that was already in development in the Faculty of Humanities. An institutional level document was drafted as a result of consideration of good practice across the University, collated by the TLG Sub Group. This document includes a process flowchart and an appendix that defines and advises on the process of scaling.

Recommendations

4. Faculty Vice Deans or Associate Deans for Teaching, Learning and Students are asked to circulate the draft Moderation Procedure document within their Faculties via Faculty Teaching and Learning Committees (or equivalent) and report any feedback to the TLSO (email to Miriam Graham: m.graham@manchester.ac.uk) by 20 June 2017.
5. Required changes will then be incorporated, and it is intended to implement the final versions of the document from September 2017.

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¹ A Procedure, subsidiary to a Policy, is an official way of doing something which must be followed.

1. Introduction

This document sets out the minimum level of moderation activity in the assessment process that must be undertaken for taught programmes at undergraduate and postgraduate taught level ² at The University of Manchester. It has been produced following consideration of relevant University of Manchester policies and guidance and the Quality Assurance Agency's UK Quality Code: Chapter B6 Assessment of Students. It has been based on guidance developed in the first instance by the Faculty of Humanities.

This document should be read with reference to the following University documents:

- [Policy on Marking](#)
- [Guidance on External Examiner Procedures](#)
- [Guidance on Examination Boards](#)
- [Policy on Feedback to Undergraduate and Postgraduate Taught Students](#)

The University's [Guidance on Examination Boards](#) lists three types of Board and their remits:

- Progression Board
- Moderation Board
- Award Board

Where reference is made in this document simply to an 'Examination Board' this reflects that the statement could apply to more than one of these types of Board. In such cases this guidance should be used in the contexts both of the activity and of local practice.

Definition of moderation

- Moderation is a quality assurance process required by the University that ensures consistent and appropriate standards of assessment design and informs the marks that are then confirmed by the Examination Board.
- Moderation refers to a range of processes conducted by an academic member of staff to ensure that assessment tasks and marking are accurate, consistent and appropriate to the level of the assessment and comparable with equivalent assessments. It is an integral part of the marking process, which takes place after initial marks have been awarded to individual assessment. It is additional to the checking of the accuracy of the marks recorded.
- Moderation can only be applied to individual assessment components rather than to unit assessment marks that might be calculated from several separate components. It can be applied to a sample of work. When inconsistencies are found in most, or all, of the sample, then the rest of the work should be moderated. Marks for the entire affected assessment component may be changed or scaled to address the inconsistency. The process should be documented.

Definition of key roles in the moderation process

- The **Academic Unit Lead** is the person appointed by the School to oversee the assessment for a unit and ensure that model / expected answers³ are produced.
- The **Internal Examiner** is appointed by the Academic Lead or nominee. They mark in accordance with

² including distance learning, collaborative provision, CPD activity which leads to an award, assessment set for students with a University Support Plan and placement learning.

³ This may not be appropriate for some assessment tasks.

the model/ expected answers and the marking scheme. For collated whole unit marks and attainment, the Internal Examiner also 'moderates' their own work in the first instance by comparing the mean mark, median, mode, standard deviation and proportion of marks in each band, as well as pass/fails against School 'norms'. Helpful questions to inform this process include: Does the mark match the feedback? Has the full marking range been used? Does the feedback given help the students learn? Have the marks been totalled correctly and transferred to the spreadsheet?

- The **Internal Moderator** is appointed by the School, overseen by the Academic Lead, to moderate the marking, in accordance with the model answers and marking scheme. They check that marking is appropriate and in line with the agreed School 'norms' referring to an agreed sample of assessed work.

University of Manchester Requirements (Policy on Marking)

- All assessment tasks must have been designed relative to the intended learning outcomes and examinations should be accompanied by guidance for the purposes of internal examining and review by an internal/external moderator.
- All assessment, including presentations, must be marked by an internal examiner, and an agreed sample reviewed by an internal moderator and overseen by an external examiner (except in circumstances outlined below).
- Where there are large numbers of students on a unit and the marking is undertaken by multiple markers, the academic lead for that unit should undertake to compare the mark distribution of all the different internal examiners to reveal significant inconsistencies in marking or issues with question setting.
- Once internal examining/first marking has taken place, internal moderation will normally take the form of moderation of a sample of 20%, through the full range of marks awarded. A suggested minimum of 10 scripts and no more than 50 scripts should be moderated.
- Marking disputes should be referred to the Chair of the Examination Board, who has the authority to recommend further interventions or a resolution.

2. Principles

- 2.1 Moderation applies to all summative first sit, referred and deferred assessment, at all levels (i.e. 4, 5, 6 and 7 and CPD activity which leads to an award).
- 2.2 For practical assessments such as presentations, fieldwork, musical or dramatic performances etc. which individually contribute more than 10% to the overall course unit mark and where marking takes place at the time of the assessment, it is recommended that moderation takes place at the time of the assessment, by having more than one Internal Examiner present. A written account on the Internal Examiner's and Internal Moderator's form, or wherever possible an audio/visual recording of the assessment, which can be used for moderation purposes by the External Examiner, should be made.
- 2.3 Internal Moderators should be identified early in the academic year to ensure that the moderation process begins with a review of the assessment tasks (prior to the External Examiner's review: see section 7).

3. Setting the Tasks

- 3.1 As an Internal Moderator you should review the tasks and questions set on a particular course unit before they go to the External Examiner.

The key issues to consider in **coursework**⁴ are:

- Does the task enable students to demonstrate achievement of one or more of the Intended Learning Outcomes (ILOs)?
- Are the marking criteria clear?
- Is the task challenging so that students can demonstrate their skills and abilities?
- Is the task clear?
- Is there overlap with tasks set in the past (designing out plagiarism)?

The key issues to consider for an **exam paper**⁵ are:

- **The individual questions**
 - Are the questions clear, concise, challenging? Is there any ambiguity (look particularly at questions with more than one element – e.g. Examine the role of... and evaluate the impacts of...)?
 - Are the questions challenging and is there scope to reach top marks?
- **The paper as a whole**
 - Are the questions of comparable difficulty? Is there overlap?
 - Are the command words (discuss, examine, explain, evaluate etc.) used 'appropriate' for the question and the level of the paper?
 - Do the questions address the ILOs of the unit? Are there any ILOs that are missed?
 - Is there overlap between the questions/question areas? How does the paper compare to past papers?
 - Is the paper in the correct format in terms of number of questions, selection and length of the exam?
- **Comparability**
 - Are the questions of comparable difficulty with other course units (e.g. in terms of command words)?

The key issues to consider in reviewing the **overall assessment** for a unit are:

- How do the different assessment tasks work together? Do they assess different things?
- Is the weighting of different elements appropriate? Are there too many small assessments?
- Do the assessment tasks together assess the ILOs of the course unit?
- Is there an opportunity for formative assessment within the course unit?

3.2 Any issues identified and suggested changes should be made in consultation with the course unit convener and prior to the paper being sent to the External Examiner.

4. Moderating Marked Work

4.1 The University of Manchester Assessment Framework suggests that the nature and intensity of scrutiny of marking will depend on the perceived risk.

4.2 As an Internal Moderator, your role is to sample 20% of both exam scripts and coursework, through the full range of marks awarded (i.e. firsts / distinctions, 2.1 / Merits, 2.2 / pass, 3rds / fails). A suggested minimum of 10 scripts and no more than 50 scripts should be moderated.

⁴ Any assessment which is not done under timed conditions.

⁵ Including online assessment.

- 4.3 For larger pieces of work such as dissertations or projects, where double blind marking takes place, an Internal Moderator should be appointed to review the overall profile of marks.

Your role in moderating individual scripts / coursework

- On individual exam scripts and coursework, check whether the mark given corresponds to the comments made by the Internal Examiner (first marker). Has the marker used the full range of marks? Has the marker provided appropriate feedback to help students to learn and to justify the mark awarded?
- Check that all marks have been totalled and input correctly onto the spreadsheet.

You must also

- Set a School-level 'norm' in terms of expected 'average performance' at unit level. These 'norms' will be a bandwidth of expected means, numbers of expected Firsts, fails, etc. Discipline 'norms' may also be required but these should not be markedly different across Schools, and Schools should maintain an oversight of them. 'Norms' establish expectations for attainment, which is helpful for both staff and students, and encourages reflection on standards.
- Check the order, range and spread of marks and all class boundaries. Is the spread of marks appropriate? How does it relate to the expected 'norms'? Are the boundaries between classes in the right place? You are checking to see if the marking is appropriate relative to other units.
- Review the statistics, mean, median, standard deviation and distribution of marks (i.e. first/distinction, 2.1/merit etc.) for the course unit – do these seem appropriate? Are the proportions in each range appropriate? Has the full mark range been used? **A student with a mid 2.1 / merit should be awarded a mark in the range 63-66%. A student with a mid 1st class / distinction should be awarded a mark in the range 80-89%.**

Course unit statistics can be generated directly from Campus Solutions. The facility will enable you to generate descriptive statistics (mean, mode, median, standard deviation, as well as the range of marks in each band), both for the overall course unit marks and for the individual assessment components that make up the course unit (e.g. exam, essay, coursework etc.). You can generate statistics for any academic year, past or present, provided the marks are in Campus Solutions. Guidance on how to generate statistics can be found in the Campus Solutions Assessment and Progression Guide⁶. In addition, a training video can be accessed at

http://www.campus.manchester.ac.uk/planningsupportoffice/SSO/ops_support/guidance/Course%20Unit%20Statistics%202011.swf

- If the mean and standard deviation are not in the appropriate range, you should discuss this with the Internal Examiner and decide how you want to scale the exam paper (see section 5). When you have decided, check your proposal with the Chair of the Examination Board and adjust the marks before the initial examinations meeting (whose role it will be to confirm any scaling decisions based on the Internal Moderator and Internal Examiner comments). Please provide a written statement (in the Internal Examiner's and Internal Moderator's form) outlining and explaining the changes made and rationale for the scaling.
- Where there are multiple markers for a unit, you will need to check the marking across markers by looking at a sample of work marked by each marker. There may be different Internal Moderators for different elements of an assessment in very large courses (e.g. one Internal Moderator for presentation elements and one Internal Moderator for the essay based element) but there should

⁶ <http://documents.manchester.ac.uk/DocuInfo.aspx?DocID=11220>

normally be no more than one moderator for each element of assessment in order to ensure consistency.

- Where different questions within an examination script are marked by different markers, it is necessary for moderation to take place at the level of the question. Where there is a single marker for the examination script moderation can take place for the paper as a whole.
- Where moderation of scripts, or an analysis of the distribution of the marks, indicates the need to review the marks for the whole group you should make a recommendation to the Chair of the Examination Board (or appropriate designate) prior to the Examination Board to:
 - A. re-mark all the scripts in the cohort; or
 - B. scale the marks for all students in relation to agreed benchmarks. Any recommendations for scaling must be discussed with the Chair of the Examination Board.

The re-marking / scaling should take place prior to the Examination Board and details of what has been applied recorded in the Internal Examiner's and Internal Moderator's form.

- You must not change any individual marks.

5. Reporting

- 5.1 You will be asked to complete an 'Internal Examiner's and Internal Moderator's Report' form on the assessment as a whole (this will include a grid including the distribution of marks, means, standard deviations etc. as well as comments about the paper as a whole).
- 5.2 If the mean mark for the course unit is outside of the normal range of marks, Internal Examiners will use the 'Internal Examiner's and Internal Moderator's Report' form to make any particular comments for you, as the Internal Moderator, on this issue.
- 5.3 Your role is also to provide feedback to the setter / Internal Examiner (e.g. on overall quality compared to other course units, spread of question answers, scope for excellent answers etc.).
- 5.4 You should also reflect and comment on the Internal Examiner's evaluation of the paper.

Please Note: Marks awarded for summative assessment are the responsibility of a member of teaching staff. Marking by staff, appointed as visiting lecturers or Teaching Assistants, must be overseen by the Academic Unit Lead.

- 5.5 The marks agreed by the Subject External Examiner after any moderation will not be altered by a Programme External Examiner or the Examination Board.

6. The Internal Examiner's & Internal Moderator's Report

- 6.1 The Internal Examiner and Internal Moderator should work in partnership to moderate the marking of taught units in accordance with agreed School 'norms'. The Internal Examiner's and Internal Moderator's Report (see appendix C) is intended to look at the assessment of the whole course unit including coursework or project work. It follows the whole assessment process and records the decisions made through the process (including assessment design, amendments to the exam paper at the question setting stage, scaling decisions as well as comments about the overall performance etc.). This report is intended to help you, as the Internal Moderator (and External Examiners) get an overall 'feel' of the paper and student performance on the paper and in the coursework.

- 6.2 The report should be returned to the Programme Administrator after the Stage 1 (Setting the Exams and Assessment) and at the end of Stage 2 (Marking Exams and Assessment). The Internal Examiner and Internal Moderator are asked to reflect on the list below. You do not have to comment on all the things on the list – it is intended as a checklist.

Assessment Strategy (course unit as a whole)

- The range of assessment tasks used within the course unit.
- Do the assessment tasks ensure student attainment of ILOs? (Are all the ILOs assessed? Are some assessed twice? etc.)
- Appropriateness of the mix of assessment tasks.
- Opportunities for formative feedback marking criteria provided.
- Do the assessment tasks aim to produce some marks that exceed 90%?

The Exam Paper Questions

- What is being assessed? (Knowledge, Understanding, Synthesis, Evaluation etc.)
- Are the questions challenging and allow students to demonstrate their skills/abilities?
- Are the styles of the questions and command words appropriate?
- Are the questions clear, concise and testing the intended learning outcomes of the course unit?
- Do the questions seem to be of a comparable difficulty?
- Is there overlap between the questions/areas? Relationship to past papers?
- How does the paper compare with other course units (level, overlap etc.)?

You should consult with the setter/Internal Examiner of the paper to agree any changes before the paper is sent to the Programme Administrator (and onto the External Examiners).

Coursework Tasks

- What is being assessed? (Knowledge, Understanding, Synthesis, Evaluation etc.)
- Are the questions challenging and allow students to demonstrate their skills/abilities?
- Are the styles of the questions and command words appropriate?
- Are the tasks clear, concise and testing the learning outcomes of the course unit?
- Is there overlap between the tasks? Between the tasks and the exam paper?
- Is the task sufficiently different from past tasks to discourage plagiarism?
- How does the task compare with other course units (level, overlap etc.)?

- 6.3 The Internal Examiner's and Internal Moderator's Report should include information about actions taken by the Internal Examiner in light of the External Examiners' comments.

7. External Moderation

- 7.1 External Moderation also plays a key role in the assessment process. The role of an External Examiner is to act as a critical friend, not a marker.

- 7.2 The principal responsibilities of External Examiners are to ensure that:

- A. assessment and examination procedures have been fairly and properly implemented and decisions have been made after due deliberation;
- B. standards of awards and student performance are at least comparable with those in equivalent higher education institutions.

Programme External Examiners:

- A. where appropriate, review project reports and dissertations, or a sample thereof, to check whether marking is consistent across the programme;
- B. have responsibility for the moderation of dissertations when engaged for undergraduate and

postgraduate taught programmes.

The role of the Programme External Examiner is to comment on the overall standard of the assessment of dissertations by reviewing:

- A. a sample, as previously agreed by the Programme External Examiner, of all dissertations;
- B. any dissertation that has been assessed as a fail;
- C. any dissertation that was the subject of substantial disagreement between the internal examiners;
- D. the dissertation of any student who may be considered for the award of a distinction.

The Programme External Examiner should not change any individual marks.

Subject External Examiners:

- A. review draft question papers and, where appropriate, the outline answers and briefs for online assessments. The minimum requirement is that, for all units that count towards the final classification of an award, all material that contributes to at least 30% of the final mark should be reviewed;
- B. ensure that intended learning outcomes are met by considering all draft assessed core work before its completion by students. This includes examination papers and any other significant assessment at the discretion of the School or at the request of the Subject External Examiner, e.g. draft examination questions, essay questions, eLearning 'discussion', and the sampling of PGT essay titles. The minimum requirement is that, for all units that count towards the final classification of an award, all material that contributes to at least 30% of the final mark should be reviewed;
- C. moderate a sample of marked examination scripts;
- D. moderate a sample of assessed coursework, including any online assessed coursework.

7.3 Subject Examiner's Role in Moderating Draft Assessed Core Work

- 7.3.1 All draft assessed core work that leads to the degree class is to be considered by the Subject External Examiner prior to it being completed by the students. This can normally be done via correspondence.
- 7.3.2 The draft question paper should normally be accompanied by outline answers except in disciplines for which more discursive answers are appropriate, alongside marking/grading criteria. In these latter cases, the Subject External Examiner should, on request, be given an indication of the expected length, style and content of the desired answer.
- 7.3.3 Subject External Examiners should satisfy themselves that the question paper:
 - A. is appropriate to the level of the unit;
 - B. is an appropriate means of testing whether students have achieved the intended learning outcomes of the unit;
 - C. covers the scope of the unit content appropriately;
 - D. is fair, i.e. that some students will not be at an advantage other than by virtue of their academic ability and commitment.
- 7.3.4 Marked examination scripts will be subject to internal processing that may range from simple checking to blind double marking, as appropriate; Subject External Examiners will not be involved in marking except in the case of OSCEs. Samples of the range of scripts will be provided for the Subject External Examiner to moderate, either before or during their visit for the Moderation Board meeting. Subject External Examiners will wish to discuss with internal examiners the arrangements for choosing the samples and moderating the internal marking to satisfy themselves that standards are appropriate and that students are being treated fairly. This discussion should take place at the earliest opportunity and both internal and Subject External Examiners should work together to monitor the effectiveness of the arrangements. A sample will normally include:
 - A. a sample of scripts from the top, middle and bottom of the range;

- B. scripts of borderline candidates;
- C. scripts assessed internally as first class/distinction or fail.

7.3.5 The scripts must be accompanied by the comments of the internal examiners and the overall mark-sheet covering all students.

7.3.6 In the majority of cases the Subject External Examiner will be able to confirm the agreed internal marks for the whole group of students. Where moderation by the Subject External Examiner indicates concern over the marking of an individual script, then the whole unit should be internally remarked. Subject External Examiners must not change individual marks. The Subject External Examiner's role is primarily to benchmark overall marking standards. Any changes must be reported to the relevant board.

7.3.7 Where moderation of scripts, or an analysis of the distribution of the marks, indicates the need to review the marks for the whole group, the Subject Examiners have discretion on whether to:

- A. request that all the scripts in the cohort be re-marked;
- B. scale the marks for all students in relation to agreed benchmarks. Any recommendations for scaling must be approved by the Moderation Board.

7.4 Subject Examiner's Role in Moderating Marked Assessments

7.4.1 Subject External Examiners have the right to see any items of coursework produced by a student by any method. However in practice they normally only see a sample of coursework. Subject External Examiners may also ask to vet draft substantial coursework tasks.

7.4.2 Where assessment is online, the programme team must ensure that the Subject External Examiner has access to the work, in order to make informed judgements on the marking and standards.

8. The Relationship between Moderation and Feedback

8.1 When feedback is given before an Examination Board, it should be clearly communicated to students that the marks they are receiving are not final and may be subject to change following the Examination Board i.e. the marks are provisional.

8.2 Some Schools / disciplines provide students with feedback prior to the moderation process, whilst others conclude the moderation process prior to providing feedback; both are acceptable practices. In either case the marking / moderation process should not delay students receiving their feedback in adherence with the University's [Policy on Feedback to Undergraduate and Postgraduate Taught Students](#).

9. Role of the Examination Board

9.1 It is the responsibility of the Examination Board to:

- ensure it understands why there have been any deviations from the expected School 'norms' and any action that has been taken as a result;
- confirm any scaling decisions based on the Internal Moderator's and Internal Examiner's comments;
- review performance across course units (historically and across that academic year);
- identify statistical anomalies or data problems;
- confirm moderation has been conducted in accordance with this procedure;
- when appropriate, ratify the marks as agreed by the Internal Examiner(s) and Internal Moderator.

10. Glossary

Terminology	Definition
Academic Unit Lead	The person appointed by the School to oversee the assessment for a unit and ensure that model/expected answers are produced. Academic Unit Lead and Internal Examiner can be the same person.
Assessment Tasks	Processes employed by staff to make judgments about the achievement of students in units of study and over a programme of study. They are the task(s) used for measuring student progress toward and achievement of the intended learning outcomes of the course unit / programme e.g. examination; coursework; presentations etc.
Command Words	These define the task and are good ways of challenging students as well as discriminating between differing ability levels e.g. outline; describe; explain; discuss; evaluate; assess; compare and contrast.
Continuing Professional Development (CPD)	The process of tracking and documenting the skills, knowledge and experience that is gained both formally and informally as you work, beyond any initial training. It's a record of what you experience, learn and then apply. They can be accredited credit-bearing individual units/ programmes/ short courses, academic credit is awarded on completion (participants are given a transcript upon successful completion). Non-accredited non-credit-bearing individual units/ programmes/short courses are not awarded academic credit on completion.
Deferral	A second attempt at summative assessment, which will be considered a first attempt, without penalty as a result of approved mitigating circumstances.
Normal Distribution	An arrangement of data in which most values are close to the mean and as one moves toward either extreme the frequency of the data thins out. Sometimes informally referred to as the bell curve (because it is shaped like a bell). For example, heights of men or women in a given population are normally distributed.
External Examiner	Moderates a sample of assessed work in accordance with University regulation / model /expected answers and marking scheme
Intended Learning Outcomes (ILOs)	Are what students should typically know and be able to do, and/or value at the completion of a course unit or programme of study, as set out in course unit and Programme Specifications.
Internal Examiner	Marks in accordance with the model/ expected answers and the marking scheme. Appointed by the Academic Lead or nominee. Academic Unit Lead and Internal Examiner can be the same person.
Internal Moderator	Appointed by the School, overseen by the Academic Lead, to moderate the marking, in accordance with the model answers and marking scheme.
Levels	The intellectual demands of course units and programmes of study. A course unit will be assigned a level, taken from the FHEQ. Levels 4, 5 & 6 correspond to the typical demands of successive years of a Bachelors degree and level 7 to the typical demands of a Masters (or Integrated Masters final year) Degree programme.
Mark Descriptors	The qualities associated with the marks used in assessing work to show how the work has been judged.
Mean	What is often meant when people say "average" of numbers. It is calculated by summing the numbers then dividing by the number of numbers. So the mean of 56,57,58 and 59 is $(56+57+58+59)/4= 57.5$.
Monotonically Increasing	Always increasing or remaining constant, never decreasing.
Norm	School-level bandwidths of expected means, number of Firsts/fails, etc., which provide an internal measure to ensure consistent and appropriate standards as well as within the UK HE sector.

Normalisation	A statistical method used to adjust the range of marks so that they conform (approximately) to a normal distribution.
Referral	(Previously known as a resit) is a second attempt at summative assessment, with penalty, as a result of the failing the first attempt.
Scaling	The adjustment of marks for an entire cohort carried out on an assessment task so that the marks better reflect the achievement of the students as defined by the Grade Descriptors.
Second Marking*	* A description is to be added here.
Standard Deviation	A measure of how 'spread out' numbers are. The higher the standard deviation for a set of marks the more spread out those marks are.
Summative Assessment	Assessment that contributes to the final mark of a course unit. Summative assessment can include both coursework and examinations. The completion of all required elements of summative assessments normally indicates the end of a unit of study.

Appendix A - Scaling

What is scaling?

After assessment marks have been combined to produce unit marks, it should be a principle that a normal spread of marks will be achieved as a result of well-designed assessments and good teaching practice. Scaling, i.e. changing an entire cohort of assessment marks, should be viewed as a last resort, and where applied it implicitly indicates problems with assessment and/or teaching in an affected unit. Therefore, if unit marks are scaled then remedial action to investigate teaching and assessment on that unit should be taken in order to avoid the necessity of repeating this the following year. Details of such actions should be reported annually as part of the External Examiner report, as well as instances where marks outside the norm range were not scaled.

Scaling should be a process discussed by and approved by an examination board where statistical data from other units are also available for comparison. Scaling should be undertaken before marks are released to other Schools or Faculties.

Scaling is the adjustment of marks for a cohort carried out on an assessment task so that the marks better reflect the achievement of the students as defined by the Grade Descriptors. It normally takes place after moderation has been undertaken if this has not led to a reasonable spread of marks. The need to scale typically arises from a problem with an assessment resulting in student outcomes that do not map onto the Grade Descriptors. In addition, the requirement for scaling may arise from an optional part to an assessment where one group of students appear to have been disadvantaged simply by their choice of option. In both cases, the outcomes of an assessment are deemed to not accurately reflect what other sources of evidence would show to be an expected level of student achievement.

Scaling is fundamentally different from a routine adjustment of marks. Moderation, which may find addition errors on scripts, and double marking are therefore not examples of scaling. Moderation may result in the adjustment of marks in a small number of cases such as where there are errors on scripts.

Typical mark ranges vary across disciplines, so it is not practicable to define precise guidelines. However, generally a course unit's mean will fall within certain limits. These should be roughly comparable across course units on which the same students are registered. There are, however, explainable differences between course units that might result in significantly different course unit means.

Scaling activity should take account of the size of the cohort taking the unit. Large classes are more likely to fall into expected norms while smaller classes may demonstrate more extreme outcomes.

It is not the intention that scaling is automatic, but rather that conversations are prompted in order to ascertain if the marking outcomes are appropriate and explain any deviations from the School 'norms'.

A number of parameters should be considered when deciding whether to apply scaling. These are:

- the Unit mean in comparison with a calculated predicted range (this would be dependent on and in reverse proportion to the number of students enrolled, arrived at using the Central Limit Theorem);
- statistical comparison of the Unit mean to mean marks attained by the same cohort of students on their other units (the 'overall mean');
- the considerations and requirements of Professional and Statutory Regulatory Bodies.

Examples of when it may be appropriate to scale

Scaling may take place at the request of an Internal Moderator, External Examiner (following discussion with the Chair of the Examination Board) or an Examination Board.

The key principle of any scaling of marks is that the process is transparent. Scaling is envisaged to be a rare event, however should normally be applied when:

- there is a significant, known and clearly identifiable issue with an assessment such as an error or ambiguity.
- the assessment, or particular examination question, turns out to be easier or harder for candidates than anticipated.
- the marking has been applied consistently but doesn't reflect the Mark Descriptor.
- the range of marks significantly fails to match student performance which might be evidenced by one or more of the following:
 - an atypical: mean, distribution (i.e. unusual patterns of high or low marks) or overall mark spread;
 - the mark profile is not that which would be expected from students' past performance on this course unit.
- on rare occasions a new member of staff working with qualitative evaluation may have misjudged an academic level of study (and scaling up or down might be necessary).
- there are circumstances which affect a specific subset of the cohort (e.g. in the case of circumstances affecting only one of a number of examination rooms).

The need for scaling is a clear indication of an issue with an assessment so, where such cases occur, it is anticipated that some form of investigation will be carried out to mitigate for the issue in future years.

Examples of when not to scale

Scaling is difficult to do accurately when a cohort is small, i.e. of less than 30 students. This is because statistical comparisons are unlikely to be valid. In such cases all scripts should be remarked.

It is recognised for certain assessment types (such as multiple-choice questions, quantitative assessment etc) scaling may be the only alternative to change the distribution of marks. In this case scaling may be used but only if the issue is deemed to be significant and re-moderating / remarking would not resolve the issue.

Ways of scaling

There are two common methods of scaling:

- to add a fixed number of marks
- to multiply marks by a fixed factor

Both have disadvantages.

Adding a fixed number of marks is hard to justify: why give all students the same additional marks? One problem is that the adjusted mark may go over 100% for some students. Another is that unless great care is taken to separate out such cases, students who obtained 0 through absence or by not answering any questions may unjustifiably receive marks. Considerable confusion can be caused later when absent students appear to have marks.

Multiplying marks by a fixed factor can be justified if it appears that in effect the work was marked out of less than 100% (i.e. the full range of marks has not been used). It is still necessary to ensure that the adjusted mark does not go over 100%, but the problem with students with 0 disappears.

Scaling must not unfairly benefit or disadvantage a subset of students (e.g. failures). This means that any scaling function applied to a set of marks must be monotonically increasing, i.e. it must not reverse the rank-

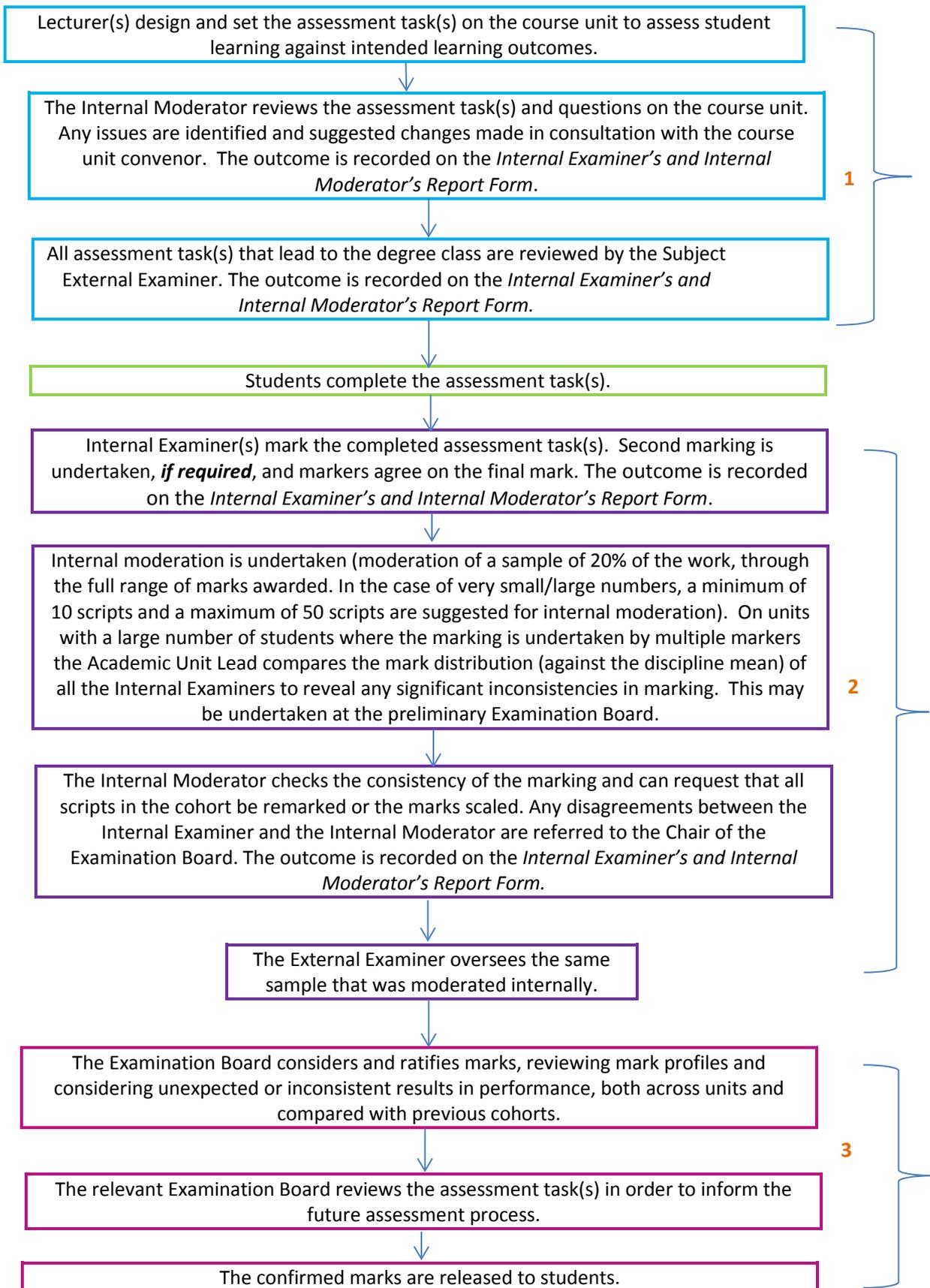
order of any pair of students. The definition of any scaling function used (its domain) must encompass the full range of raw marks from 0 to 100%. For example, 'Add 3 marks to all students' or 'Multiply all marks by a factor of 0.96' are both valid scaling functions. 'Add 4 marks to all failures and leave the rest unchanged.' is not acceptable because it would cause a student whose raw mark was 39 (a fail) to leapfrog a student who got 41 (a pass).

After scaling

In cases where scaling has been required it is good practice to review the associated assessment design in order, where appropriate, to resolve any underlying issues and remove the need to scale in future.

Appendix B - Moderation Flowchart

Phase



STAGE 2: MARKING EXAMS AND ASSESSMENT

Coursework Performance:

Mean
Median
Standard Deviation
Lowest Mark
Highest Mark

Before Moderation	After Moderation

Unseen Exam Performance:

Mean
Median
Standard Deviation
Lowest Mark
Highest Mark

Before Moderation	After Moderation

Overall Performance:

Undergraduate

1st (70%+)
2i (60-69%)
2ii (50-59%)
3rd (40-49%)
Compensatable Fail (30-39%)
Fail (<30%)

Before Moderation	After Moderation

Overall Performance:

Masters

Distinction (70%+)
Merit (60-69%+)
Pass (50-59%)
Compensatable Fail (40-49%)
Fail (<39%)

Before Moderation	After Moderation

Overall Performance

PGCert / PGDip

Pass (40-49%)
Compensatable Fail (30-39%)
Fail (<29%)

Before Moderation	After Moderation

Examiner Comments:

Internal Moderator's Comments:

Scaling

This section should be completed by the Internal Moderator after discussions with the Internal Examiner.

Does this course unit need to be scaled?

If yes, what method of scaling is to be used?

Why is this method appropriate?