Trialling Criteria-referenced Marking in an Undergraduate Statistics Unit

or

What we learnt from tutors and students about scoring rubrics in the process…

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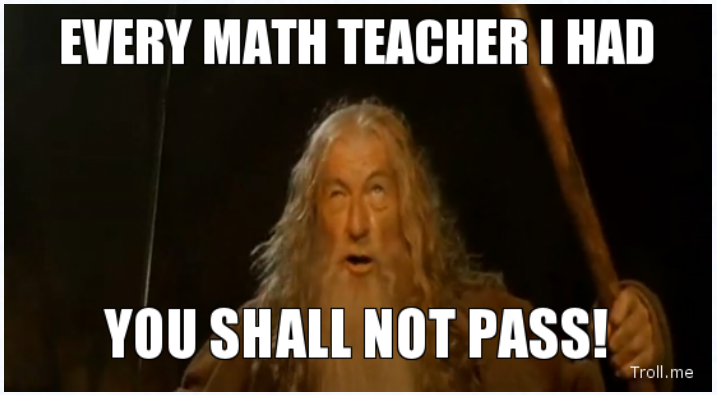
The Problem:

- Large, service teaching, first year statistics unit.
- Learning outcomes of the assessment task involved the student demonstrating:
  - data analysis skills,
  - quantitative decision making, and
  - communication.
- Written report had a defined structure that was guided by a checklist.

→VERY large marking task!

What do students and tutors think about assessments?

Students



Tutors

both would much rather be spending time like this:

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Aims of the new marking scheme

FOR MARKERS:

- standardise the tutors' expectations of each criterion's levels of achievement,
- provide consistency of mark allocation between markers, and
- increase the efficiency of marking.

FOR STUDENTS:

- signal to students what is expected in the assessment task, and
- provide useful feedback on their individual achievement.

First trial

Started small scale

- Added general level of achievement descriptors.
- Markers marked same reports - still saw variations in extreme markers.
- Marker feedback after the first trial was essential - informed further re-write and a second trial.

Monash University Grade Descriptors	
HD : (80-100)	Exceptionally clear understanding of the subject matter.
D : (70-79)	Strong grasp of the subject matter
C : (60-69)	Competent understanding of the subject matter
P : (50-59)	Satisfactory. Demonstrates appreciation of the subject matter.
F : (0-49)	Unsatisfactory.

Second trial

Full scale

- The descriptors were worded specifically to each criterion.
- Co-ordinator and markers met *together* to discuss the rubric's intent, content and mark allocation structure.

	Excellent **10 - 9**	**Good** **8 - 6**	**Pass** **5**	**Below Standard** **4 - 1**	**Not shown** **0**
ABSTRACT	The abstract is clear and concise.	Abstract can be followed but is not clear and/or concise.	Abstract can be followed but is neither clear nor concise.	Abstract is incomplete or incomprehensible.	Abstract is absent.

How successful was the final scoring rubric? Markers' views

Appreciated the opportunity to

- discuss and compare their marking with their peers, and
- have input into the development of this rubric tool.

Had generally positive comments on the use of the rubric

- Marking was faster with easier decision-making on levels/marks.
- Confident of consistency between marking episodes (no baseline drift).
- While they liked just circling descriptors some markers felt they still needed to write comments for the student's benefit.

Markers' views

Did it standardise marking and make it more efficient?

- Overall comparison of markers showed good consistency with only a small variation at the extremes of the "tough" marker and the "nice" marker.
- The mark spread was truly reflective of the work… with good differentiation between poor and excellent work.
- Avoidance of "**Baseline Drift**" from day to day and first to last marked was noted:

  …*[The rubric made it] "easier for consistency in my approach to different submissions from different students and marking at different times."*

- Less personal angst over choice of mark was noted

  …*"Making decisions about allocating marks is easier because of the grading."*

Markers' views

Did it give the appropriate and informative feedback to students that markers wanted to give?

- Ease of reading feedback

  … *"Marker and student can see at a glance the overall grading for each part of the project."* … *"Students and staff can clearly see what has been done well and what hasn't."*

- Use as a guide to explanation of mark and increase ease of answering queries

  … *"It saves the demonstrator time in explanation if a student queries their mark."*

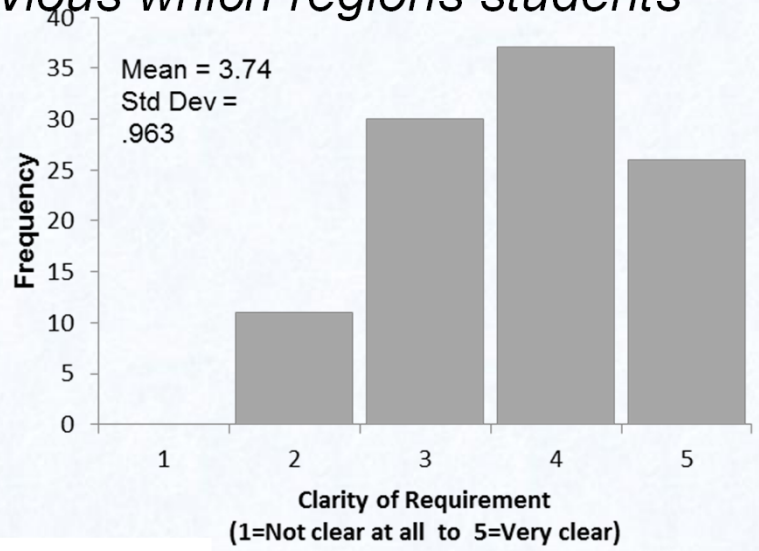
How successful was the final scoring rubric? Students' views

Did students think the rubric was clear?

In general positive comments about easy to follow and direct:

… "Very intuitive and simply delivered."

… "Easy to understand dot points was good rather than a big chunk of writing… More subjects across all faculties should have marking criteria so it is obvious which regions students need improvement in."



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Students' views

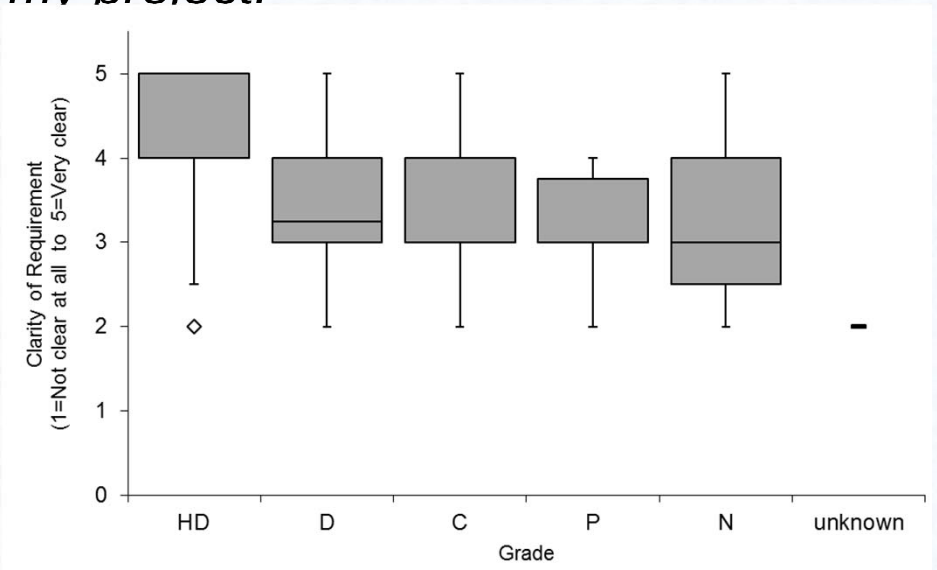
Did the students appreciate knowledge of the rubric before completing the task?

Many welcomed the rubric as a guideline:

- to learning how to write a good report, and
- to the expectation of the standard needed for a good grade.

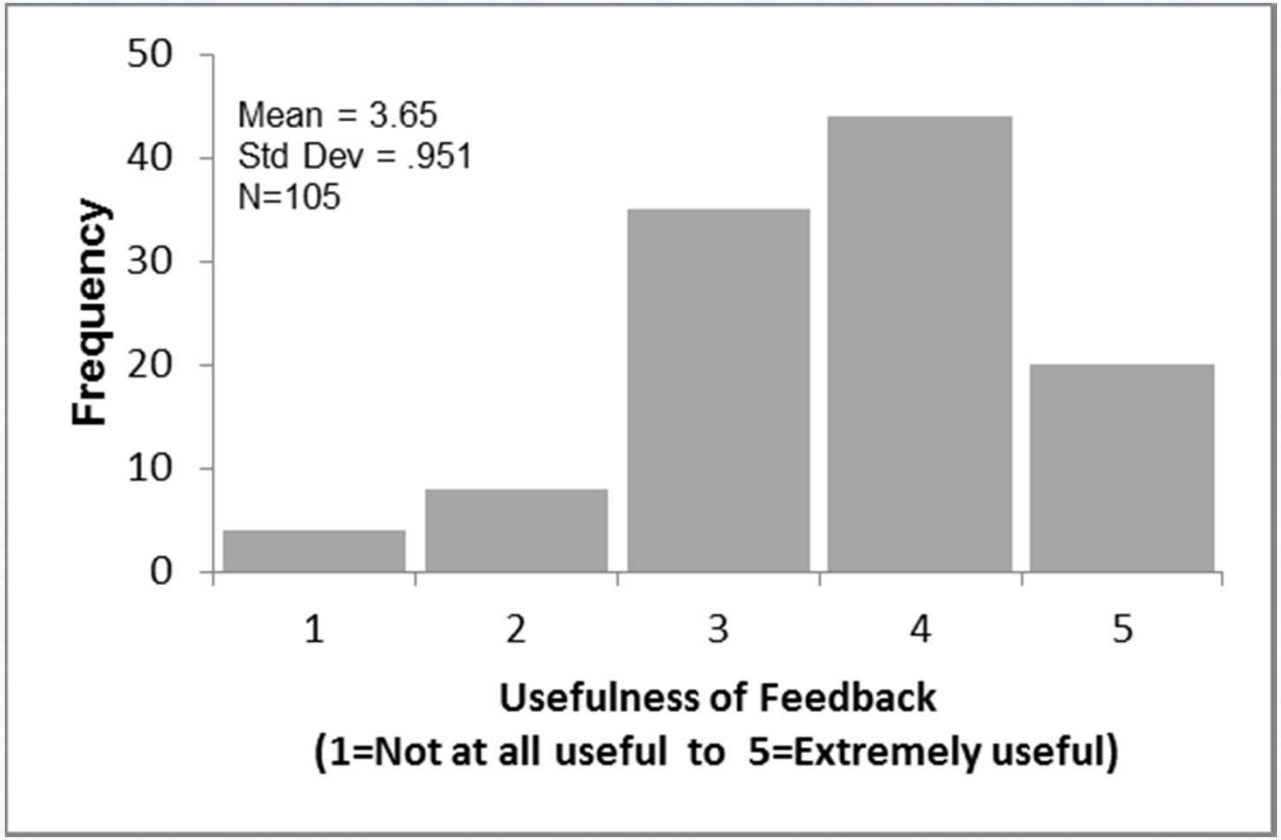
… *"The instructions and marking criteria made it very clear what was required from the project. I found it extremely useful when completing my project."*

This was more prominent with the high-achieving students.



Students' views

Did students think they received good feedback?



Students' views … problems highlighted

However, there was a small group of students who did not appear to recognise the feedback in the rubric.

…*"It was vague but I admit it wouldn't be feasible to have extremely detailed feedback for each student."*

…*"Marking was quite detailed but I would have liked more instructions."*

- …*"Feedback would have been useful advice to know BEFORE submission date."*

How successful was the final scoring rubric? Unit Co-ordinator's view

Initially time consuming to write an appropriate detailed rubric but,

- developing it focussed the assessment and marking scheme to the learning outcomes, and
- was helped greatly by having the generic maths descriptors from MathAssess project.

Once in place:

- Gave a focus for discussion with markers about the learning outcomes and the expectations on the students.
- Resulted in less questions from markers and students.

Recommendations for the implementation of a scoring rubric

1. The levels of achievement for each criterion have to able to be differentiated easily. This is achieved by having descriptors specific at each level for each criterion in the task.
2. As it is a scoring rubric – the marks attached to each level need to be definite and clearly articulated to the markers.
3. The markers must have a common understanding of the levels of achievement and the marks attached to them. This requires meeting of the assessment team to ensure a shared interpretation of the descriptors for each level.

BONUS OUTCOME

In the process of developing the rubric, we developed a collegiate teaching team … increasing skills, capacity, confidence and teamwork among the casual tutors who are most of our markers.

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