

Peer marking to increase engagement with assessment tasks

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Context

- Second year Science students, Semester 2
 - Small “workshop” class
 - 15 in 2007, 21 in 2008
 - Workshop component unique to these students
 - Existing oral presentation (assessed)
 - Aim 1: generic presentation skills
 - Aim 2: communication of scientific content
- Increase effectiveness?

The talk

- Individual
- 10 min plus 3 min questions
- 4% of final mark for course
 - Leads on to essay on same topic (12% of final mark)
 - 40% generic presentation skills, 60% scientific content
- Genetics of a particular human disease
 - Literature research
 - Every student allocated different disease
 - Information unique to specific talk
 - But scientific objectives identical

Why peer marking?

- Seeking to engage students further
 - Never any questions from students
- Seeking to maximise impact of single assessment
 - Students learn from work they are assessing (Topping, 1998)
- Assessment criteria state target audience is “your colleagues in this class”
 - Peer marking validates the assessment
- Fairness from multiple markers
 - Remove need for double marking by staff?

How the peer marking was done

- Anonymous peer markers
- Final talk mark 50% instructor mark, 50% average peer mark
 - Students marked talks in weeks they were not presenting
- Detailed rubric (page 1 of 2 shown on next slide)
 - In student handbook
 - Discussed within “giving a presentation” workshop
 - Various criteria within “presentation skills” or “scientific content”
 - Each criterion given mark out of 10
 - Excellent = 7.5-10, Very good = 6.5-7.5, Poor = 5-6.5, Needs work = 0-5
 - Standard within each level described
 - Returned to presenter as feedback
- All marks released at same time, once all talks completed

Feedback and Marks for OMIM Talk 2009

Presenter's name: _____

Student marker / staff marker

Topic: _____

	Excellent (7.5-10 marks)	Very good (6.5-7.5 marks)	Competent (5-6.5 marks)	Needs work (0-5 marks)
Presentation Skills	(Weighted to 40%)			
Structure / 10	<input type="checkbox"/> Talk was well-structured and logical, making it easy to follow	<input type="checkbox"/> I could follow the structure of the talk	<input type="checkbox"/> I couldn't really follow the structure of the talk	<input type="checkbox"/> There didn't seem to be a structure for this talk
PowerPoint slides / 10	<input type="checkbox"/> Text was always very easy to read <ul style="list-style-type: none"> o Perfect size font o Clear contrast colour o Clear spacing <input type="checkbox"/> The amount of text was just right	<input type="checkbox"/> Most text was easy to read, but: <ul style="list-style-type: none"> o Sometimes too small o Sometimes bad colour o Sometimes poor spacing <input type="checkbox"/> There was a bit too much text	<input type="checkbox"/> Most text was readable but: <ul style="list-style-type: none"> o Too small for comfort o Colour was difficult to see o Poor spacing made everything seem jumbled together <input type="checkbox"/> There was too much text, but it still worked OK	<input type="checkbox"/> Text was virtually impossible to read <input type="checkbox"/> There was way too much text for me to be able to read it
Figures and Tables / 10	<input type="checkbox"/> All figures were very clear <ul style="list-style-type: none"> o Excellent resolution o Large enough size to be easily seen <input type="checkbox"/> Figures were used very effectively: <ul style="list-style-type: none"> o Really helped me understand points o Really helped me visualise the topic o Really helped me concentrate 	<input type="checkbox"/> Most figures were clear <ul style="list-style-type: none"> o Some were poor resolution o Some were too small <input type="checkbox"/> Figures were quite effective: <ul style="list-style-type: none"> o Helped me to understand o Helped me to visualise o Helped me to concentrate o BUT should have been more/better 	<input type="checkbox"/> Few figures were clear <ul style="list-style-type: none"> o Most were poor resolution o Most were too small <input type="checkbox"/> Figures were a bit effective: <ul style="list-style-type: none"> o Helped a bit to understand o Helped a bit to visualise o Better than nothing 	<input type="checkbox"/> Figures were too poor to be of use <input type="checkbox"/> There were no/hardly any appropriate figures
Oral presentation style / 10	<input type="checkbox"/> Presenter spoke really well: <ul style="list-style-type: none"> o Spoke very clearly o Neither too slow nor too fast o Used pauses to give breaks between sentences and ideas o Neither too loud or too soft o Interesting rather than monotone o Maintained eye contact o Confident body language o Livened up the presentation with humour or anecdotes 	<input type="checkbox"/> Presenter did a good job speaking <ul style="list-style-type: none"> o BUT mumbled a bit o BUT was a bit too fast or too slow o BUT not enough use of pauses o BUT was a bit too loud or too soft o BUT tended to be a bit monotone o Mostly faced the audience, but didn't really use eye contact o Body language distracted a bit, e.g. some fidgeting, standing really still o Humour/anecdotes not very effective 	<input type="checkbox"/> Presenter did OK speaking <ul style="list-style-type: none"> o I could still follow o BUT mumbled o BUT was too fast or too slow o BUT words tended to run together o BUT was too loud or too soft o BUT was monotone o Faced audience only sometimes and didn't use eye contact o Body language distracted o Humour or anecdotes distracted 	<input type="checkbox"/> Presenter did a poor job <ul style="list-style-type: none"> o Mumbled o Too fast or too slow o Too loud or too soft o Monotone o Couldn't be understood o Looked at the screen, computer or floor most of the time o Body language distracted

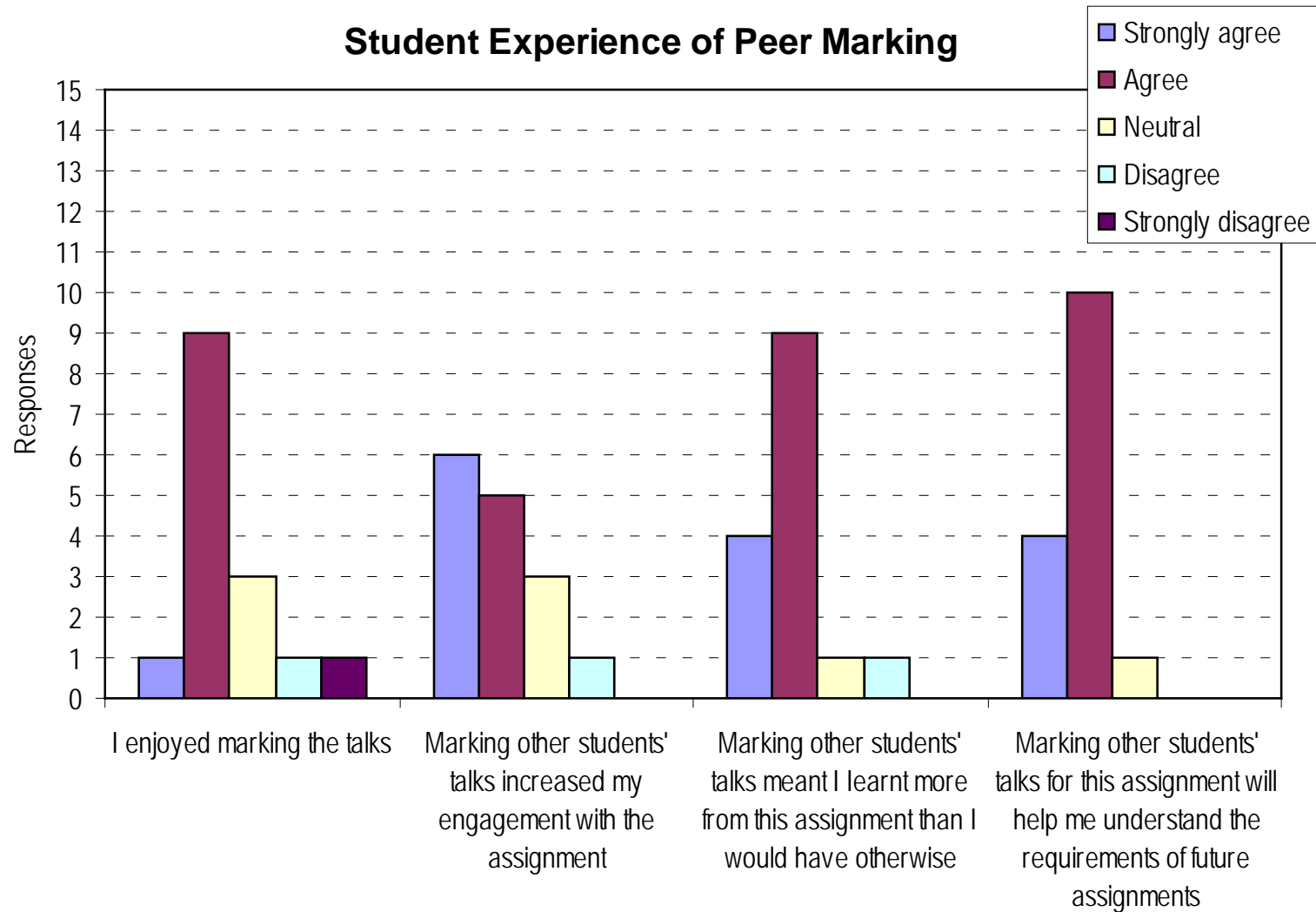
Note: comments from audience members about this rubric

1. Perhaps not a good idea to have overlapping marks (i.e. put boundary marks into one category or the other, not both)
2. Perhaps including High Distinction level column (i.e. split “excellent” column into two) would empower peer markers to award high marks
(my opinion, without evidence, is that this would encourage peer markers to award most students higher marks, i.e. wouldn't help to spread the marks but rather would just shift marks higher)

I can email you a MS Word file of the full rubric if you want it
(michelle.coulson@adelaide.edu.au)

Evaluation of student experience

2007 cohort



Evaluation of student experience

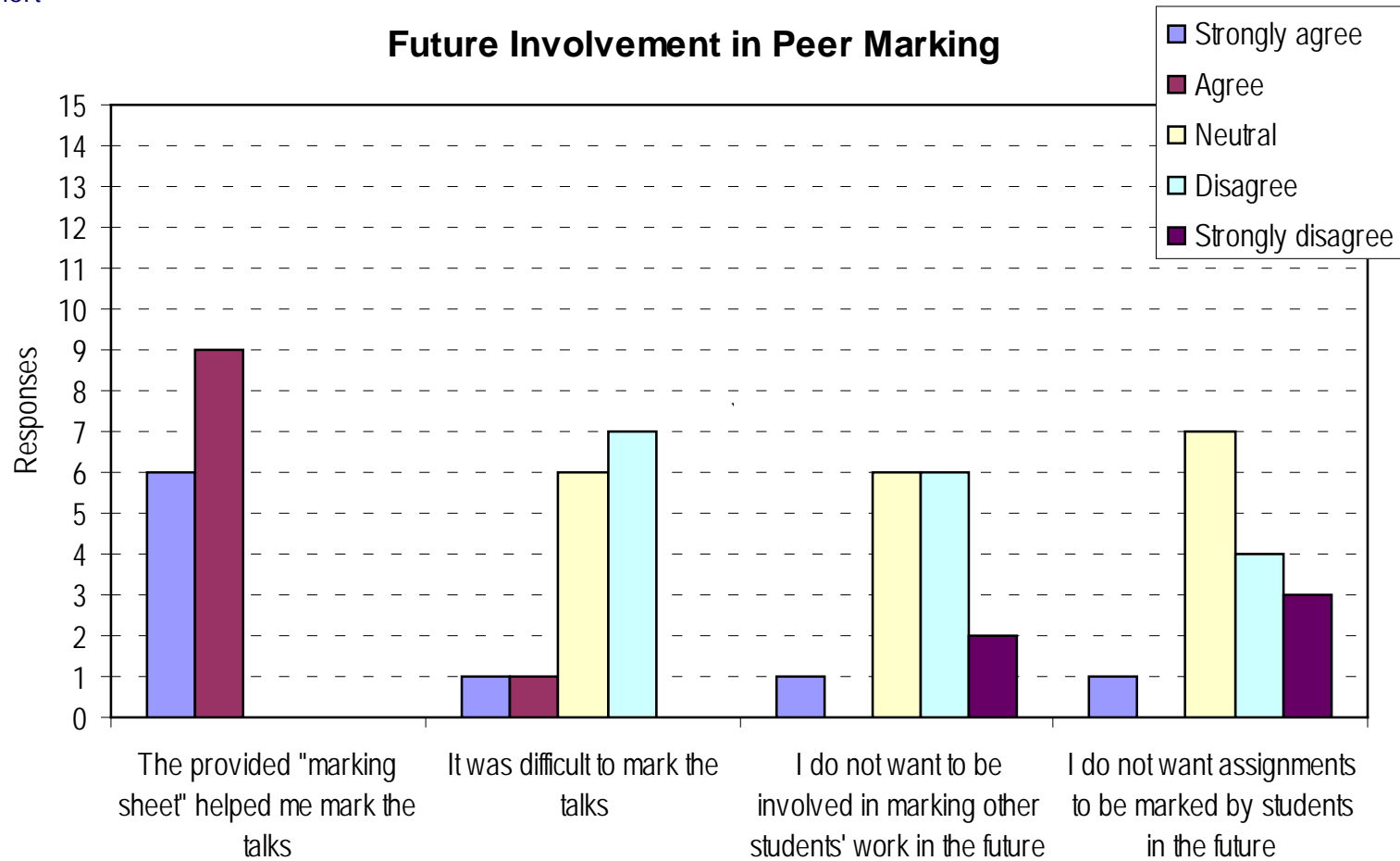
Student comments in open-ended questions:

Made me pay attention and learn something, helped me in preparing my own talk

When marking, listening to the talks was not as interesting as when I was not marking; I couldn't engage as much when I was marking

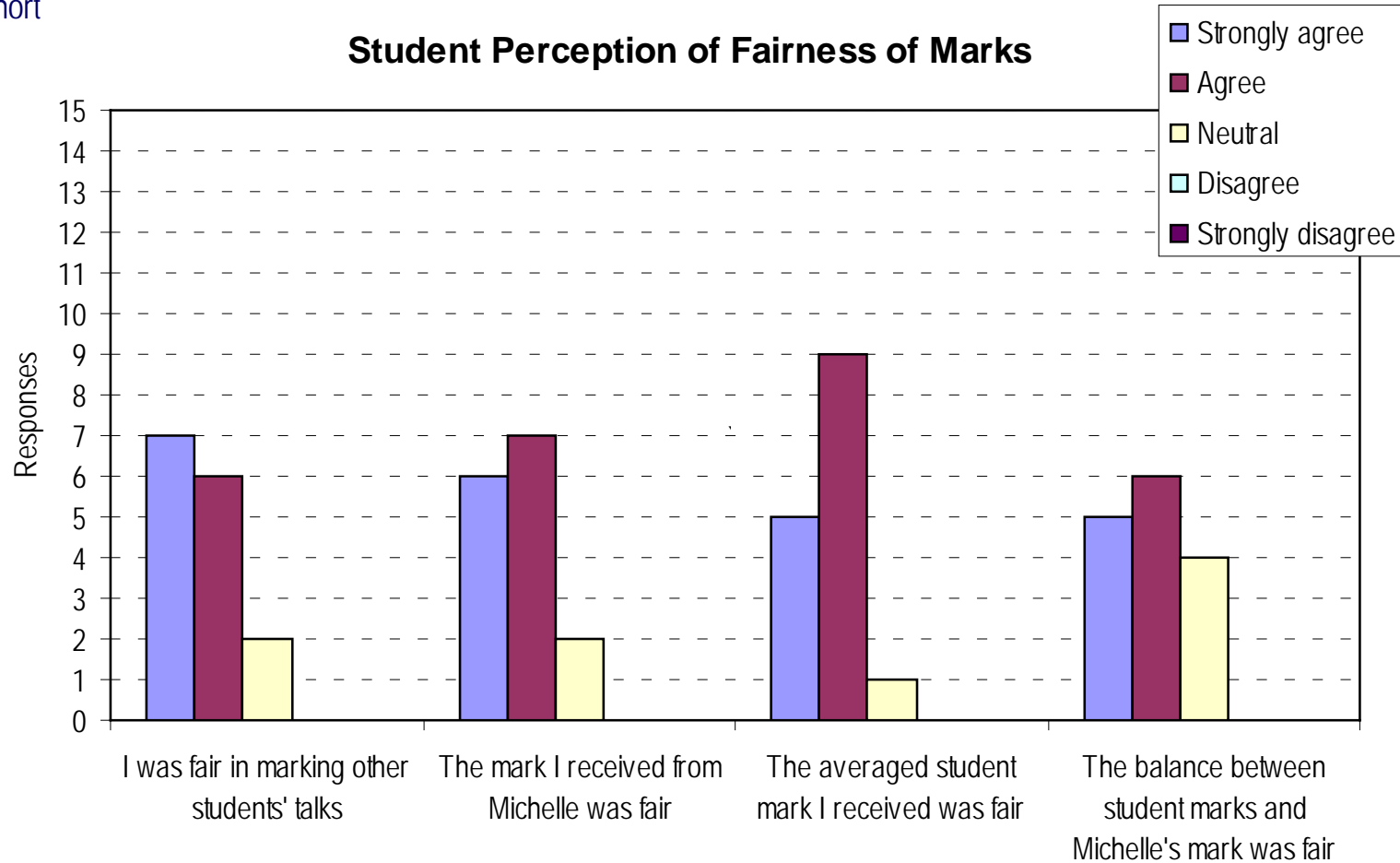
Evaluation of student experience

2007 cohort



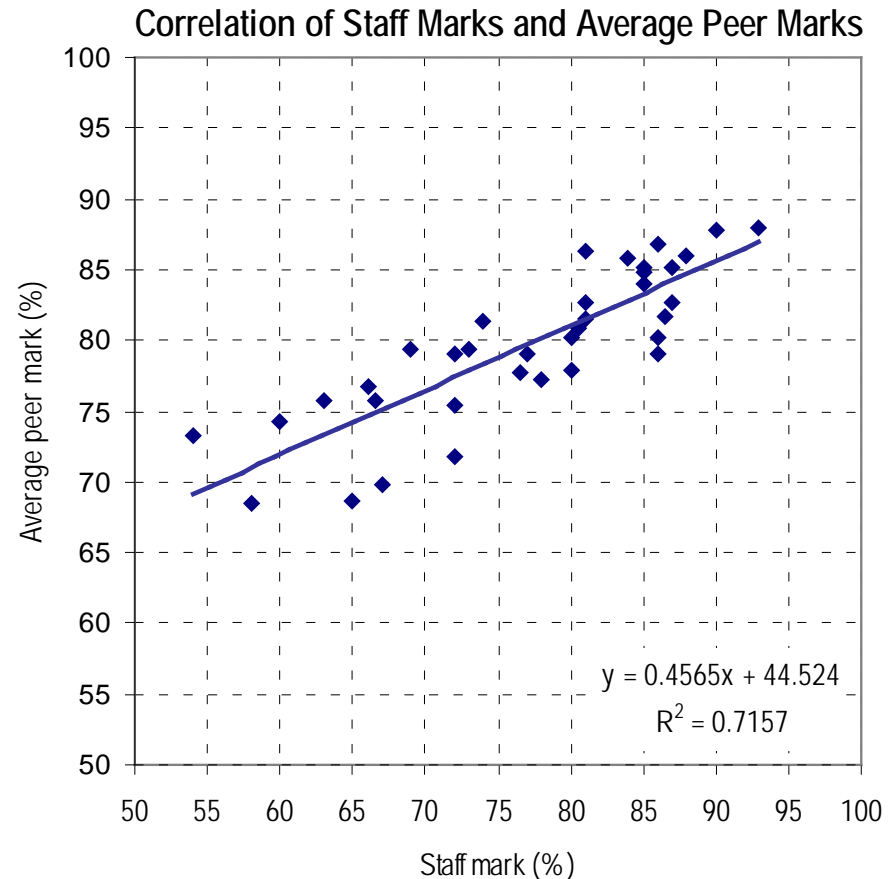
Evaluation of student experience

2007 cohort



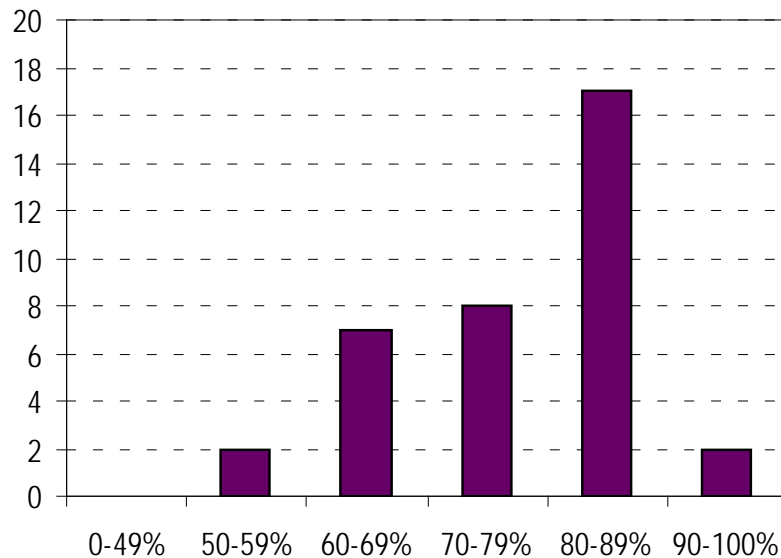
Evaluation of the marks

- Concern about reliability of peer marks expressed by peers and staff
(Sittiworachart & Joy, 2008; Orsmond, 2004)
- Current study:
 - Mean staff mark = 77%
 - Mean average peer mark = 80%
 - Good correlation
 - Expected but not guaranteed
(Falchikov & Goldfinch, 2000)
 - However...

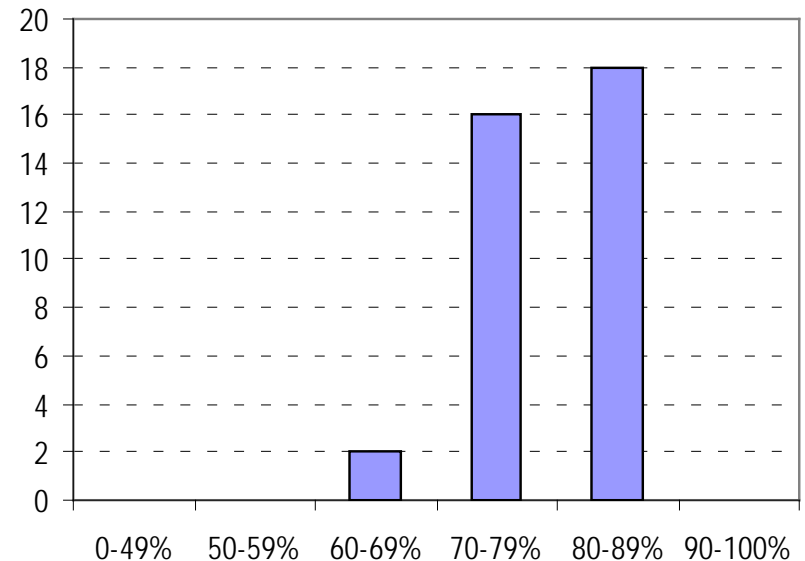


Evaluation of the marks

Distribution of Staff Marks



Distribution of Average Peer Mark



It was hard to decide what mark to give and (I) often just reverted to 8/10 so my marks weren't that reflective of the quality of the work, but I would like to develop this skill.

Evaluation of the marks

- “Clustering” of peer marks (Paré and Joordens, 2008; Sutton *et al.*, 2004)
- Consequences?
 - Intersection at ~82%
 - Weaker students benefited from peer mark
 - Strong performers disadvantaged by peer mark
- Minimise effect by retaining significant weighting of staff mark

Conclusion

“Learning more by listening to the talks, able to feel involved in the talks rather than just sitting and doing nothing. Enables me to improve on my talks in the future knowing what the requirements are.”

References

- Falchikov, N. and Goldfinch, D. (2000) Student peer assessment in higher education: a meta-analysis comparing peer and teacher marks. *Review of Educational Research* **70**(3), 287-322.
- Paré, D. E. and Joordens, S. (2008) Peering into large lectures: examining peer and expert mark agreement using peerScholar, an online peer assessment tool. *Journal of Computer Assisted Learning* **24**(6), 526-540.
- Orsmond, P. (2004) *Self- and Peer-Assessment: Guidance on Practice in the Biosciences*. Teaching Bioscience: Enhancing Learning series. Leeds, UK: Centre for Bioscience, The Higher Education Academy.
- Sittiworachart, J. and Joy, M. (2008) Computer support of effective peer assessment in an undergraduate programming class. *Journal of Computer Assisted Learning* **24**(3), 217-231.
- Sutton, R., Bartlett, T., Bellamy, M., Fincham, D., Mole, J. and Perry, C. (2004) *Evaluating peer assessment of practical write-ups using an explicit marking schedule – same approach, different institution* [Online] Available www.bioscience.heacademy.ac.uk/resources/guides/selfaddmat.aspx [2009, June 20]
- Topping, K. (1998) Peer assessment between students in colleges and universities. *Review of Educational Research*, **68**(3), 249-276.