



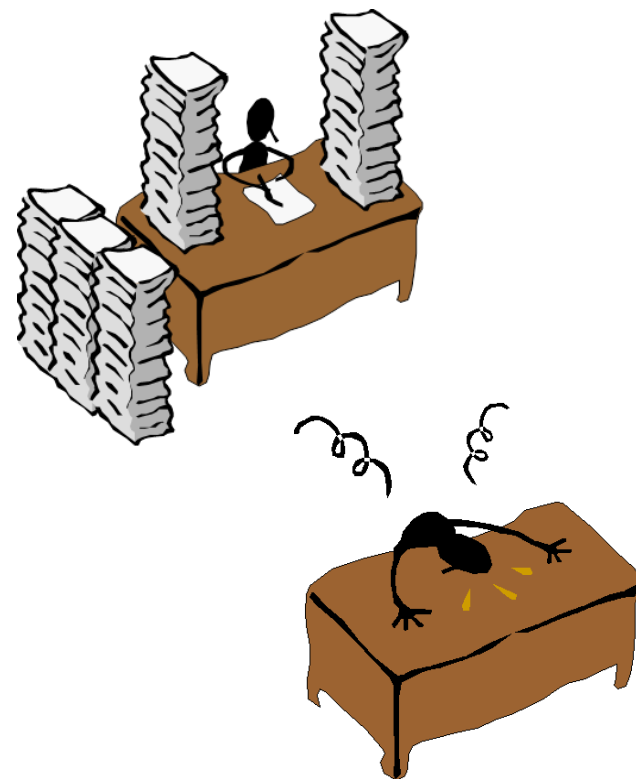
# Assessment for learning - closing the feedback loop

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**It's a waste of time writing  
detailed feedback when  
students don't read it !!!**





## Why don't (all) students read / use feedback?

**“No relevance to subsequent modules”**

**“It's only there to justify the grade”**

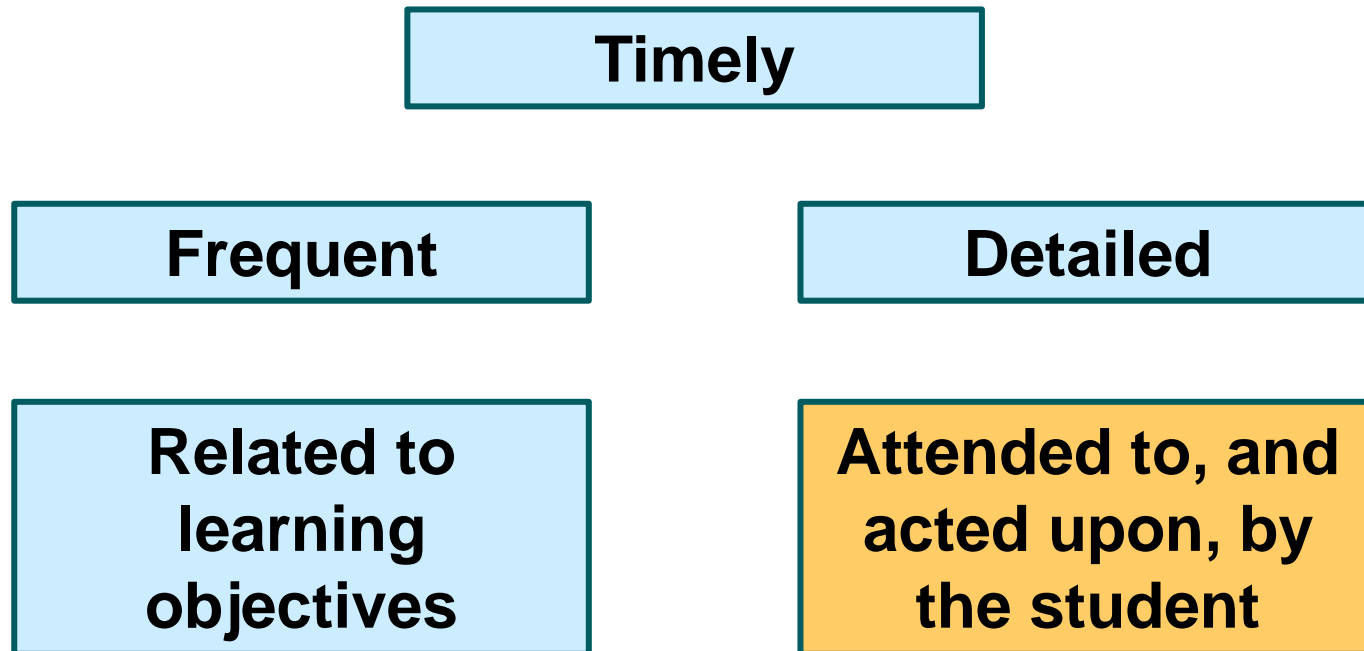
**“It's just criticism”**

**“It's not helpful”**

**Bad grade:  
“too depressing ☹️”**

**Good grade:  
“not needed 😊”**

## Characteristics of effective feedback?



## Barriers to use of feedback by students?

**Misunderstood  
wording used in  
feedback**

**Different  
definitions of  
words**

**Discipline  
context of  
feedback not  
recognized**

**Contradictory  
feedback from  
different staff /  
different courses**



# Our study

MSc in Medical Genetics PGT  
(~30-40 students per year)



...to consider how the m...  
 ...paragraph adds very much – you c...  
 ...mutations may follow on from newborn sc...  
 CF including infertility. Condensing this first...  
**Suggestions for improvement**

- Consider very carefully the **logical flow** whether a more logical order is possible, shorter, allowing more on the key scienc...
- You need to be more critically aware: suggests misunderstanding of autosomal recessive a second normal (“=”) allele but th... an inconsistency. Also note that... about everything you have le...  
 ...ledge. The general...

## Discussion

*Are interesting and relevant aspects addressed?*  
**Yes, some very good information**  
*Has a range of information from outside literature been addressed?*  
**yes**  
*Is a good level of understanding shown?*  
**yes**  
*Has the discussion been related to relevant literature where appropriate?*  
**yes**  
*Has effective use been made of diagrams?*  
**yes**  
*Are there good concluding remarks?*  
**It might be nice to conclude with...**

**Use feedback proforma + comments directly on report**

“good point about the polymorphisms but they don't need to be in surrounding genes - they could be anywhere in genome”

<p>CF report number: 15</p> <p>Diagnosis reports:          Don't add on with clear information, a few little errors particularly with HGVS.</p> <p>Discussion:          Some interesting material in Discussion, but it might have been put together in a more logical sequence. Some technical mistakes appeared by mixing up genotype-phenotype correlations - would have been possible to have dealt with genotype-phenotype on the last and then moved on to consider how these are derived in this setting. Clarity is needed. The paragraph adds very much but could be shorter. Some points are repeated or misspelled. Consider the CF including infertility. Condensing the report would be a good idea.</p> <p>Suggestions for improvement:          • Consider very carefully the logical flow, and where sections are not flowing think about whether a more logical order is possible (and make notes with this relevant background shorter, allowing more on the key science - the...          • You need to be more critically aware: suggests misunderstanding of autosomal recessive a second normal (“=”) allele but th... an inconsistency. Also note that... about everything you have le...          ...ledge. The general...</p> <p>Overall structure and formatting          Very good overall, though be careful to make structure as logical as possible.</p> <p>Molecular Analysis Reports          • Available details that should be on all reports:          o Patient name, correctly spelled          o Patient gender &amp; DOB          o Reason for referral          o Details of hospital / OP          o Date          o Date sample received          o Date of report, signed &amp; checked          o Date          o How carried out          o Very good          o Results          o (HGVS) are quite 100%          o Very good          o Interpretation in words          o Also appropriate following for patient          o See for Sanna &amp; Clara's report IHT might be a good next step.          o Also appropriate following for family          o Yes, though not PND at this stage for Sanna's family: unless he is later shown to have CF, PND is not appropriate.</p>	<p>Discussion          Are interesting and relevant aspects addressed? <b>Yes, some very good information</b>          Has a range of information from outside literature been addressed?  <b>yes</b>          Is a good level of understanding shown?  <b>yes</b>          Has the discussion been related to relevant literature where appropriate?  <b>yes</b>          Has effective use been made of diagrams?  <b>yes</b>          Are there good concluding remarks?  <b>It might be nice to conclude with...</b></p> <p>CF report number: 15          Very good          Candidate name          Reference list</p>
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Over 1500 CFTR mutations have been established, yet the functional significance of only a fraction are known (Freedman *et al*, 2009). The table below demonstrates the classification system for the most frequently occurring mutations based on their molecular defects. In general, patients who appear to be homozygous for class I - III CFTR mutations present a phenotype which renders them pancreatic insufficient (Castellani *et al*, 2008). However, additional factors such as other genes within the genome and environmental factors often make these genotype-phenotype associations unreliable (Castellani *et al*, 2008). Patients or even siblings affected by the same CFTR genotype often manifest the disease in different ways, however this may due to polymorphisms in **surrounding** genes having an effect (Freedman *et al*, 2009). Class IV- V mutations however present a phenotype which renders than





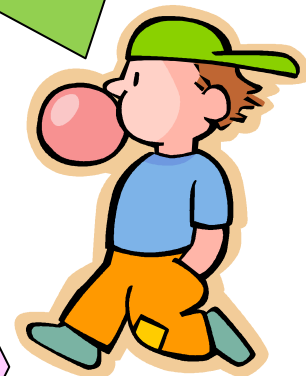


I've written the  
same feedback  
before for this  
student!!!

**Bad mark** → too  
depressing to read  
comments ☹

**Good mark** → no need  
to read comments 😊

Academic year  
2011-12



**“Feedback vivas”** – to promote  
reflection by students  
**Franks & Hanscomb**  
(5<sup>th</sup> UoG L&T conference)





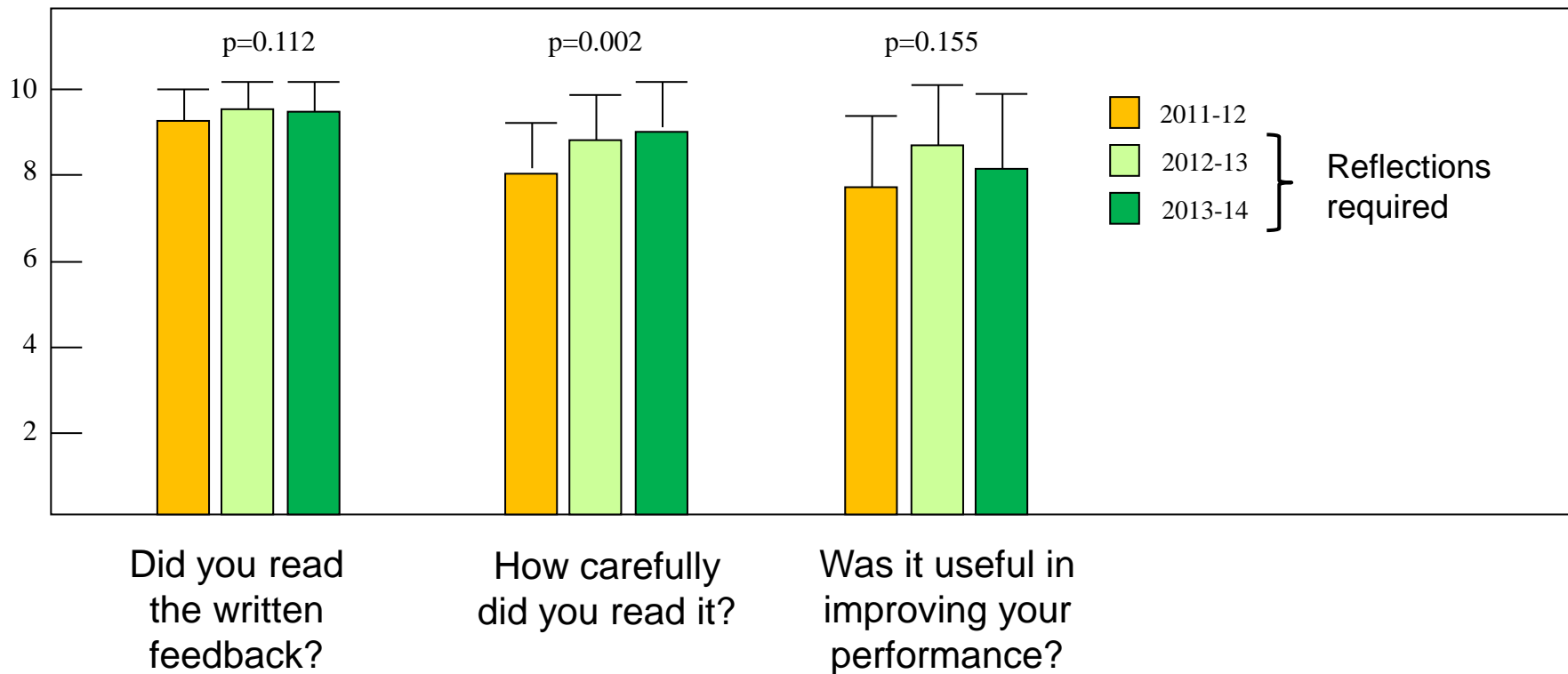
## Force students to read the feedback in 2012-13!!!

- Require that students write a “**reflection**” for feedback on the first four assignments
- **Assign a grade** to the reflection to encourage participation (equivalent to 10% of the assignment grade)
- Compare
  - attitudes to / use of feedback
  - grades before (2011-12) and after (2012 >) implementation of reflections



## Instructions for the reflection (~400-500 words)

- What do I think was good about my performance?
  - What aspects did the feedback highlight as good?
  - What do I think might be improved for next time?
  - What suggestions have been made in the feedback that I might apply in future work?
- Action plan





## 2011-12

- “It depends on the mark of the whole work if it is high grade I honestly not very carefully read them & vice versa.”
- “...I was more likely to read positive feedback carefully than negative as I wanted to know what to keep doing...”

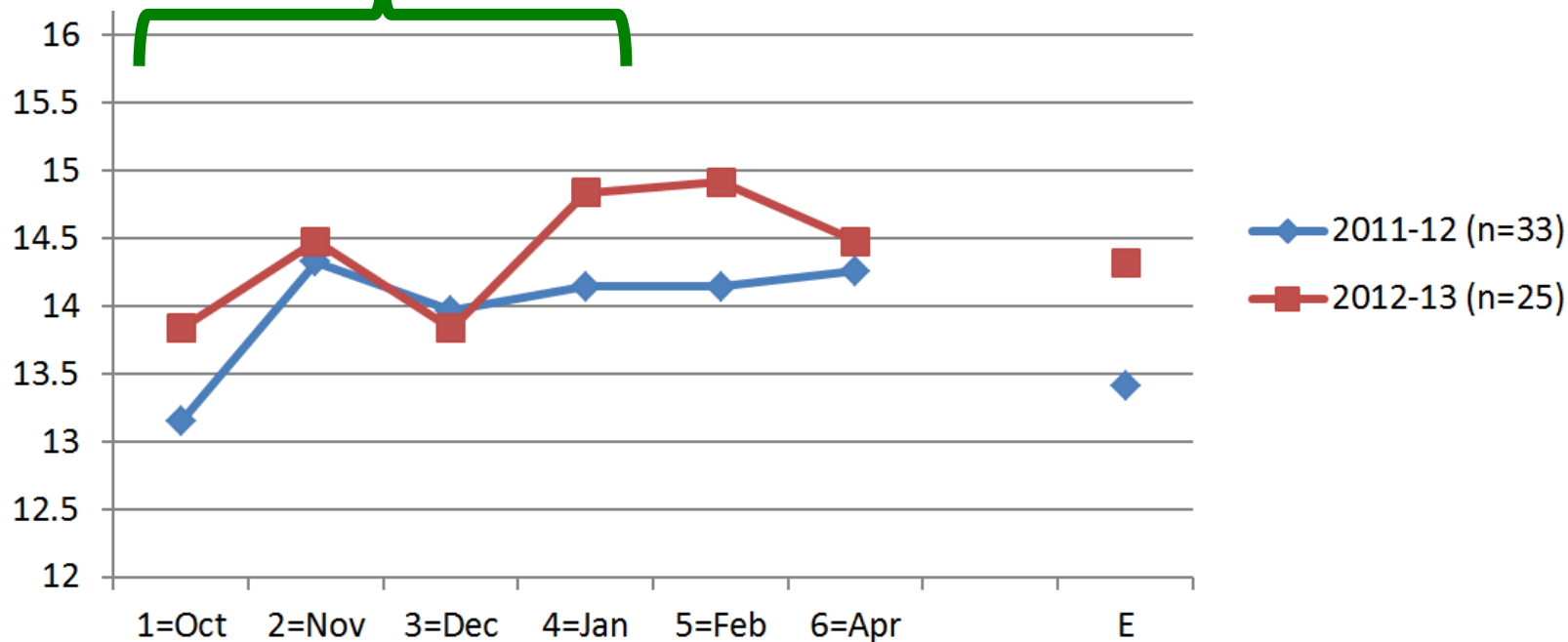
## 2012-13

- None of student comments indicated difference in use of feedback depending on grade



### Reflections required on feedback in 2012-13 (counts 10% to assignment)

Average coursework grades



Grades for equivalent items of coursework  
(Oct & Nov assignments had formative activities)



## Student views on use of reflections (2012-13)

- “...makes people genuinely read and assess the feedback they get ... Reflecting on the feedback also lets you evaluate your own work.”
- “It helped me to remember which aspects I should focus on ... and keep score on my improvement.”
- “It meant that at the start of the year I got in the habit of actually reading the feedback, later on I genuinely wanted to read them.”



## But also...

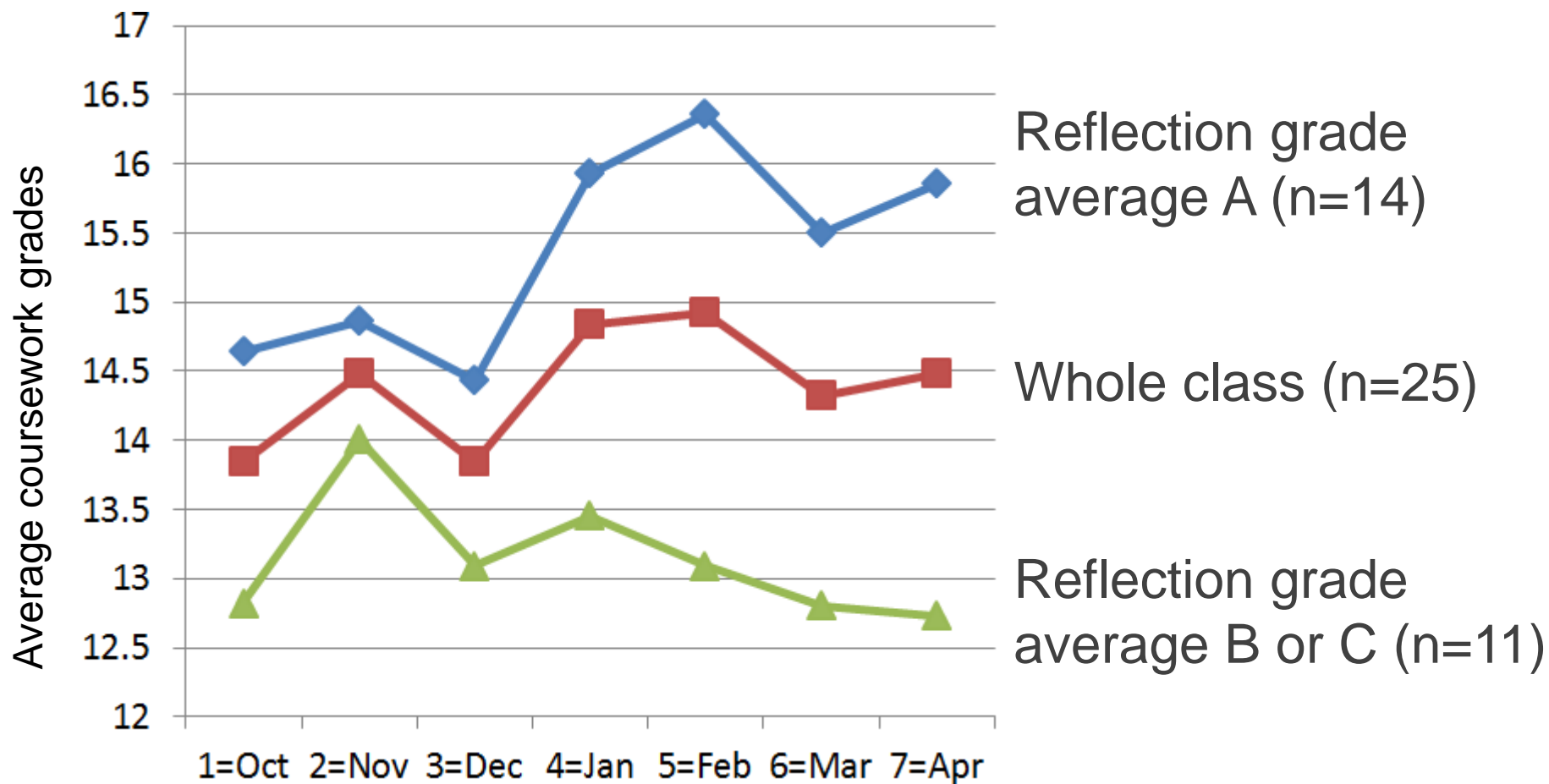
- “I did not find this very useful. I read the comments and understood them. It seems unnecessary to write a report, have it marked, write that I understood the marking & then have that marked.”
- “I think that people should decide on their own if they are going to use the feedback to improve their work or ignore it and make the same mistakes repeatedly. It feels a step too far for spoon feeding those who are lazy in the class.”





## Despite using feedback, some students report their grades not improving:

- “Although feedback was useful and allowed me to see how I could improve my grade I found that after applying these changes my grade did not improve as I would expect.”
- “I think sometimes I avoid the same mistakes but get feedback later on which entailed other mistakes ... not necessarily improving my performance.”



Comparison of grades for students generating “real” reflections versus those “rephrasing the feedback”



## Why might grades not improve?

- Misinterpreting the feedback (many studies)
- Demoralising and demotivating effects of continuing low grades (Black & Wiliam, 1998)
- “...improvements made in some directions may expose residual (or even precipitate new) shortcomings in other directions.” (Sadler, 1989)
- In our study the group that are not reflecting deeply on their feedback tend not to improve



## Next year of the study (2013-14)

- Explained to students the link between reflection quality and grades for the previous year
- Emphasised the need to **reflect** rather than rephrase the feedback
- Reinforced the need for “**active** action plans”
- Submission date for reflection prior to next assignment

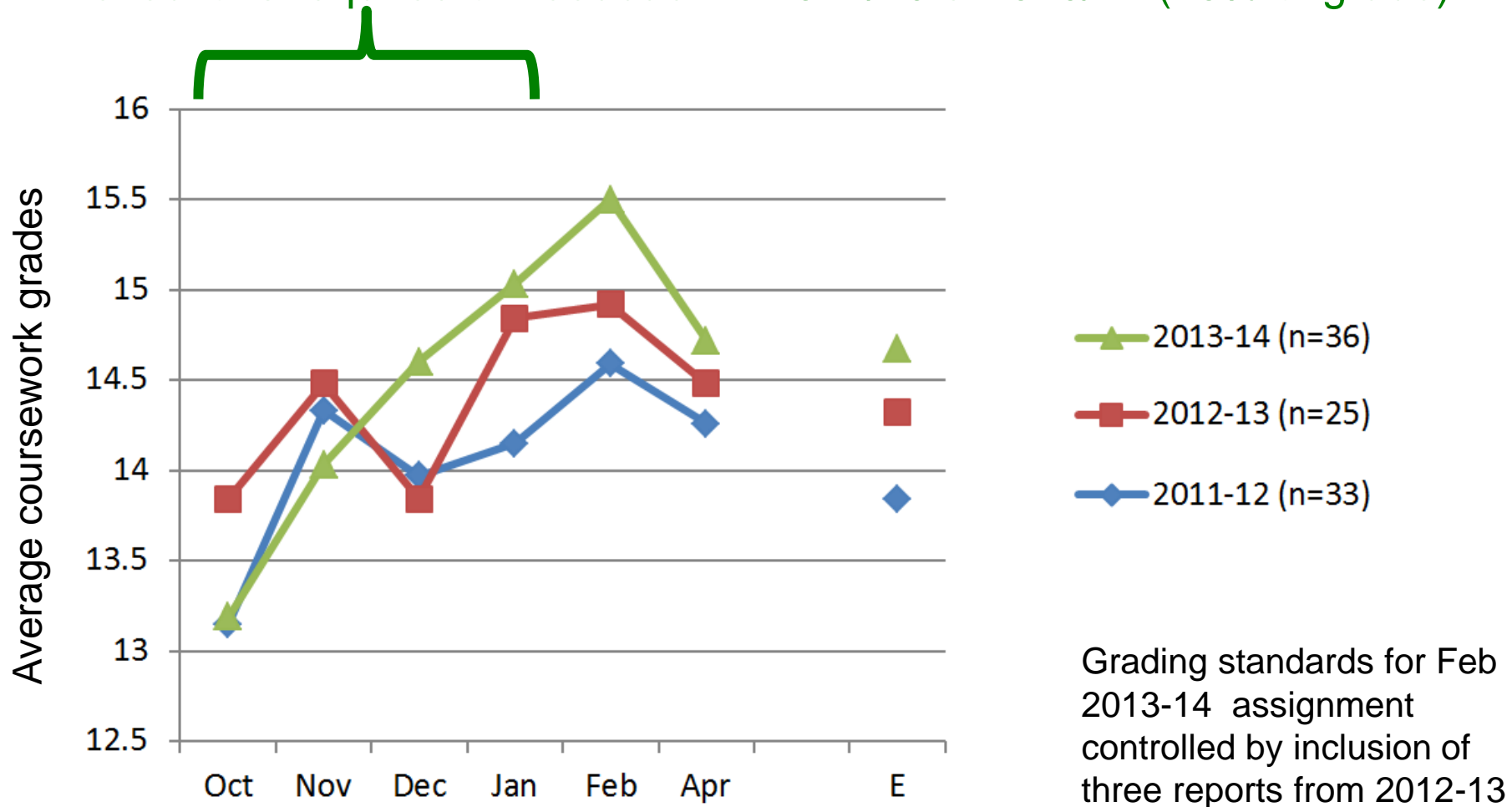


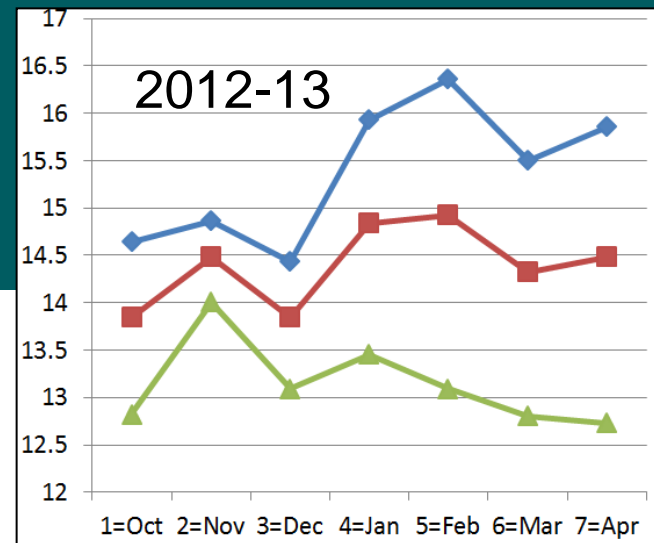
## Withholding the grade

- “...a grade ... before students have had the opportunity to interiorise feedback on their work, ...invariably interferes with the assimilation and understanding of this feedback.”  
(Taras, 2002)
- So, for 2013-14 session students not given grade until:
  - *Either*: reflection completed (assignments 1-4)
  - *Or*: a few days after feedback on the work (subsequent assignments)

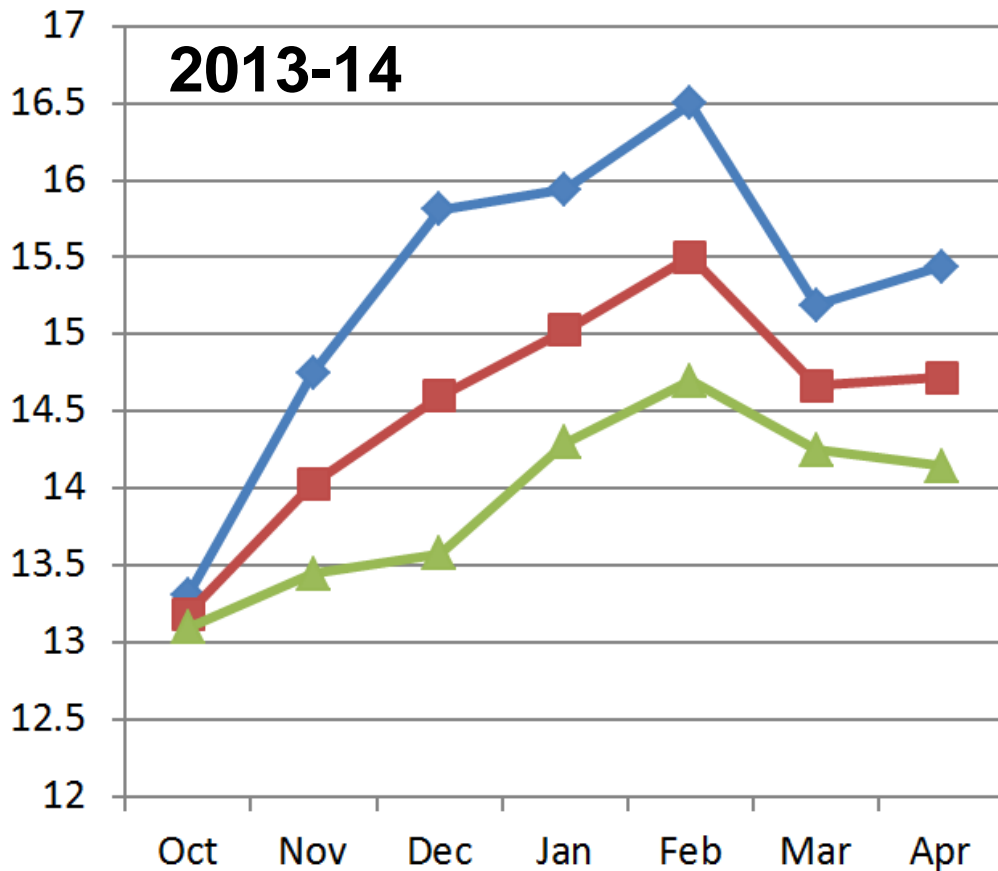


## Reflections required on feedback in 2012/13 & 2013/14 (10% of grade)





- Reflection grades A (n=16)
- Whole class (n=36)
- Reflection grades B/C (n=20)



Again, splitting the class by quality of reflections generates a significant difference (not as stark)





## Student views on withholding the grade:

- “If you get grade with feedback, knowing grades beforehand affects your mood. If grade is good you are happy and don't feel need to have look at feedback, if grade is bad you are upset and don't want to have a look.”
- “...concentrate on the feedback more because if somebody gets bad grade will not read the feedback will be upset.”
- “It made me focus on the feedback and allowed me to reflect better. If I had the grade I would be more focussed on that.”



## Student views on withholding the grade:

- “We would always read the feedback. Not getting the grade is rather frustrating at the time”.
- “It was good but it also increases the anxiety. Also sometimes disappointing as feedback and grade don't match.”
- “It forced us to look and evaluate our own work but it was mostly used to guess the grade. Often it was impossible to correlate severity/number of comments with grades.”



# Conclusions / Discussion



## Conclusions

- Writing a short assessed reflection on feedback facilitates feed-forward into future assignments, improving grades
- Students who wrote the most thoughtful reflections, analysing aspects of their approach, and generating clear action plans, benefitted most
- Benefits were more pronounced when
  - the reflection had a separate deadline from other work
  - students were made aware of the benefit to previous class
  - grades were withheld until reflection submitted(any or all of the above may have contributed)



## Facilitating reflection & feed-forward

- Benefits of short written reflections assessed by staff:
  - Provides opportunity for dialogue
  - Generation of action plan facilitates feed-forward
    - Feedback should focus on how to improve, not what went wrong
  - Provides opportunity to review interpretations of feedback and action plans & provide additional guidance
- Grade withholding
  - Effective at getting students to engage with the feedback
  - Students try to work out the grade themselves & self-evaluate
    - May overestimate grade due to “positive” comments



## What about larger classes?

- Release of grade only after online “reflection” submitted (Irwin et al, 2013) → token or misdirected effort in some cases
- Use teaching assistants to evaluate & provide feedback on reflections / action plans?
- Discussion of feedback / applying feedback in peer / tutor groups?



## Perspectives

- It's not enough to give feedback – it's essential to ensure feed-forward to close the feedback loop
- Some students need more guidance in reflecting and generating useful action plans
- Additional time spent in developing skills for using feedback to feed-forward is valuable





## References

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**Reflection on DMD: 17**

**Grade: < B2 >**

Reflections are expected to relate to issues raised in feedback from staff but may also include other issues that the student has recognised.

- 1 = excellent evidence
- 2 = very good evidence
- 3 = good evidence
- 4 = some evidence
- 5 = no evidence

	1	2	3	4	5
Is there clear evidence from the reflection that the DMD feedback was read and considered carefully?	✓				
Is there clear evidence of reflection on approaches taken during preparation of the DMD report?		✓			
Is there clear evidence of reflection on how the approaches to work might be improved or built on for future reports?		✓			
Is there a clear action plan?			✓		

**Best to include a separate and clear action plan – see the example reflection in the laboratory manual p14.**

**Remember that even if you found the word count to be limiting, you did not use all the page count and could have included another 4 pages of diagrams (or tables) to help explain aspects of the techniques or of the result interpretations or the overall testing sequence strategy or follow-up testing.**

implemented in my DMD data analysis assignment and I will continue to do so.

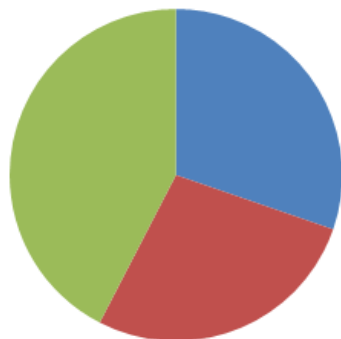
I also need to work on linking ideas together throughout my work; but particularly in the introduction and when providing background information and explaining why it is relevant. Sometimes when I am writing, I write each part independently and then piece it together which can at times result in parts feeling disconnected from each other. In future, when preparing my report I will attempt to read each section and try to connect and relate points together to ensure it is obvious as to how they are related to one another.

Another point which I should consider when writing such assignments on the use of a particular technique are future methods which may be used to replace and improve on the current methods; these could be considered in the discussion or when concluding.

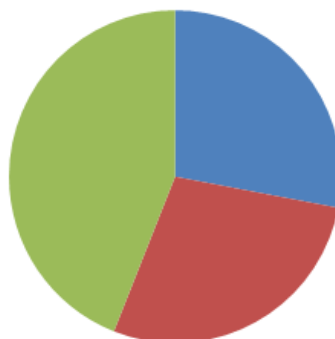
Previous feedback I received from my PCR-RFLP suggested that I should use more tables and figures; which I did in this IHC assignment. The feedback this time confirmed this was more effective in the explanation and illustration of some points, especially the table which compared the cryo- and paraffin sections and also the diagram of the MLPA technique; as I feel this is best explained diagrammatically. I should perhaps have used a diagram to explain the western blotting technique and to aid in the explanation of how this method gives more information on comparison to



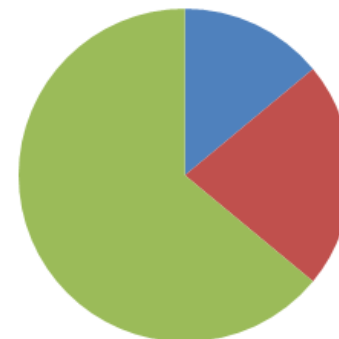
2011-12



2012-13



2013-14



■ UK  
■ other EU  
■ international