Providing feedback to individual students on their examination performance (at no extra 'marking time' cost)

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…which bring us to the question of 'how?'

- Marginal gains (effective working/administration)
  - Very small, low cost adjustments – **big impact**
  - Think global, act local – **valuing mundane actions**
    - anti-'big-initiative' – most impact from doing regular stuff better
  - This is NOT rocket science/not 'new'

- Individual feedback on examinations
  - How can it be done, effectively, for large cohorts?
  - MCQ, short answer, long answer (essay-based)

- Report of my recent sabbatical…

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The Challenge

- We all want to give more and better feedback. How?
  - ~~Spend more time on it?~~ Add 10 mins to the marking of every exam answer, in a university…? 😂
  - *c.4000+ psyc answers x 10 mins = 666.666 hrs…*
  - Do things **differently**

- Principles

  - Must not cost more time
  - Work more <u>effectively</u>
  - Minimise 'compliance-driven' effort
  - Do pedagogically useful things well
  - Do things only once
  - Solutions must be **scalable**

Examinations alienate (exclude) students

- Students traditionally have exams 'done _to_ them'

BSc(H) Psychol w/ Criminol FT , Year 2
Pass Stage 2
2009-10 Academic Year
Exam Board: X200901197   BSc Psychology with Crim YR 2

Current Academic Stage: 2	Credit Points	Weight	Mark	
200910 CRIM20111 Penology	20	Agg.	48	Pass
Examination		100	48	
200910 CRIM20121 Policing in a Democratic Soc	20	Agg.	62	Pass
Examination		100	62	
200910 PSYC20013 Research Methods&Stats II	30	Agg.	64	Pass
Coursework		70	62	
Examination		30	67	
200910 PSYC20021 Social & Lifespan Dev Psyc	20	Agg.	66	Pass
Examination		50	64	
Examination		50	67	
200910 PSYC20102 Individual Differences	10	Agg.	55	Pass
Coursework		100	55	
200910 PSYC20142 Cognitive&Bio Psyc	20	Agg.	68	Pass
Coursework		50	76	
Coursework		50	59	

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Doing things differently: deconstructing the grading process for essay-based exams

Old/Current

Marker grades the scripts, and writes short notes about each answer

well structured, good knowledge, mostly addresses the question but descriptive and only 'received' evidence presented: High 2:2

New

Rates essay on set criteria:

☐ *Answering the question*

☐ *Knowledge & understanding*

☐ *Use of evidence*

☐ *Critical evaluation*

☐ *Structure and organisation*

☐ *Clarity of writing*

☐ *Length*

**Marker notes
Audit
Moderation
External examining**

Can be used for so much more!

Reconstructing the grading process

- Bespoke SharePoint list with data entry form for each student

- Marker fills out _only_
  - Marker ID (if more than one marker)
  - Question attempted
  - Ratings on the grading criteria/feedback elements
  - The Grade
  - Repeated for each exam question

- Marker can work at PC, laptop, tablet, mobile phone
  - They can work wherever they want/need to
  - They do only what is necessary (NB marginal gains…)
  - They do everything only once (NB^2 marginal gains…)

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PSYC20[redacted]2017

Search this site

Grade PSYC20[redacted] : Check

⊕ new item

Grade All Items EditGrades ··· Find an item

Edit	S_No	1stQA	1QGrU	1NEqU	2ndQA	2QGrU	2NEqU	MarAQ	NEqU	BANNu
	N000001	Q2	22L	52	Q4	FMi	32	2	42.00	3LOW
	N000002	Q2	1Lo	74		Zer	0	2	37.00	FMAR
	N000003	Q2	3Mi	45	Q1	22L	52	2	48.50	3HIGH
	N000004	Q1	3Mi	45						!!!
	N000005	Q2	22H	58	Q1	22M	55	1	56.50	22HIG
	N000006	Q1	3Lo	42	Q5	FMa	38	2	40.00	3LOW
	N000007	Q3	FLo	18	Q4	3Mi	45	2	31.50	FMID
	N000008	Q1	22H	58	Q4	3Mi	45	1	51.50	22LOW
	N000009	Q2	22L	52	Q1	22H	58	1	55.00	22MID
	N000010	Q1	22M	55	Q2	22M	55	1	55.00	22MID
	N000011	Q1	22L	52	Q4	3Mi	45	2	48.50	3HIGH
	N000012									

Assessment   Timetabling Site   Psych Tech Services site   ✎ EDIT LINKS

PSYC20[redacted]2017

Search this site

N000001

	1	2	3	
Marker:	○	●	○	Submit

	Q1	Q2	Q3	Q4	Q5	
Quest No:	○	●	○	○	○	

	Exc (5)	VGood (4)	Good (3)	NdsWk (2)	Fail (1)	N/A
Address question	○	○	○	●	○	○
Knowledge & underst.	○	○	●	○	○	○
Use of evid wider read	○	○	○	●	○	○
Crit eval/ argument	○	○	○	●	○	○
Structure/ Org	○	○	●	○	○	○
Clarity of writing	○	○	●	○	○	○
Length	○	○	●	○	○	○

Grade: 22L ▾   Submit

N000001

Q1   Q2   Q3   Q4   Q5
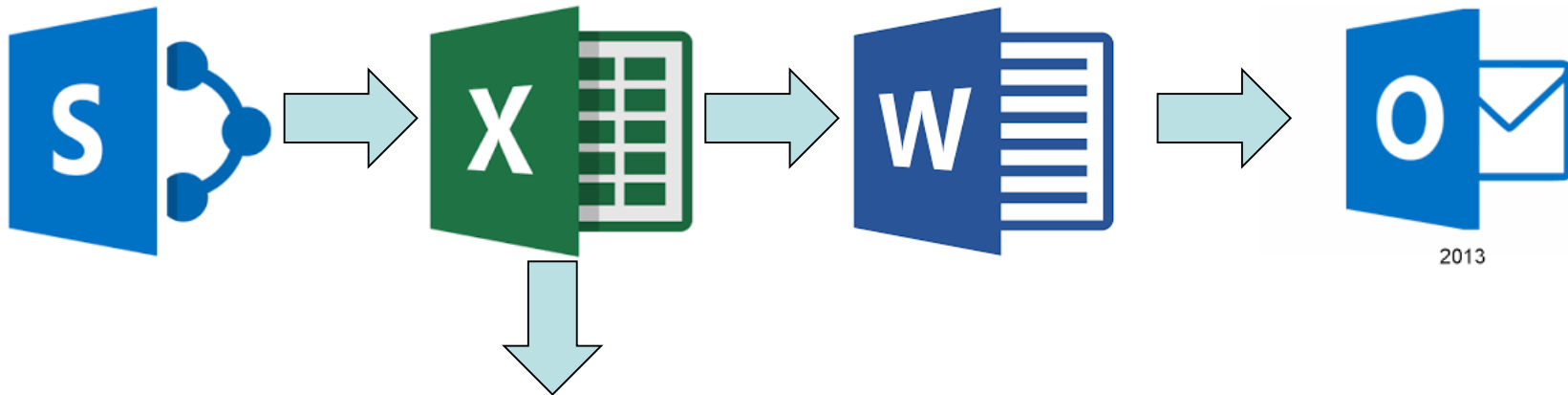
What happens next?

- Data downloaded from SP

- Exported to pre-constructed excel spreadsheet template

- Descriptive stats emailed to ML

- Mail merge used to email the feedback to students

[Pre-constructed templates]

Diagnostic stats for course/module leaders, to support evaluation of module, of assessment tasks, moderation, and grades formatted for submission

What the module leader receives (immediately!)

Summary stats for questions based on numerical equivalents

Qs:	Q1	Q2	Q3	Q4
n	142	14	24	43
mean	61.19	60.43	62.58	63.35
mode	62	52	58	62
stdev	7.45	7.95	11.97	6.46
min	42	52	45	52
max	89	74	96	81

Overall summary stats for criteria

Crit:	c1	c2	c3	c4	c5	c6	c7
n---	223	223	223	223	223	223	223
mean	3.59	3.7	3.44	3.4	3.52	3.71	4.27
mode	4	4	3	3	4	4	5
stdv	0.77	0.74	0.7	0.75	0.77	0.74	0.78
min-	2	2	2	2	2	2	2
max-	5	5	5	5	5	5	5

Overall summary stats

n	223
mean	61.7
mode	62
stdev	7.91
min	42.0
max	96.0

Analysis by marker

Marker:	1	2	3
n---	60	60	103
mean	60.27	60.47	63.27
mode	58	62	62
stdv	10.71	3.61	7.59
min-	42	52	48
max-	96	68	81

+Full set of grades formatted ready for submission

	Code	n	n/class
1st	1st Exc.	1	
	1st High	2	
	1st Mid	7	
	1st Low	13	23
2:1	2.1 High	20	
	2.1 Mid	33	
	2.1 Low	54	107
2:2	2.2 High	40	
	2.2 Mid	26	
	2.2 Low	17	83
3rd	3rd High	8	
	3rd Mid	1	
	3rd Low	1	10
Fail	F. Marg	0	
	F. Mid	0	
	F. Low	0	0
	Zero	0	

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What the student receives

- Email addressed to them using given name (Eckstein *et al.*, 2007; Sandstrom, 2017)

- Overall grade

- Grades for each question answered (reminder of questions attempted)

- Ratings on each criterion for each question answered
  - get this in various formats (see later slides)
- General cohort feedback included

- Contingent links to activities and resources (*process* stuff)
  - Feedback as *dialogue* (feedback is not an 'artefact')

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Example exam feedback on essay-based exam (delivered by email)

Dear Jose,

This email gives you some feedback about your performance on the May/June 2013 PSYC20021 Lifespan Developmental Psychology exam. The feedback is in three parts. The first part gives you information about your grade on each of the questions that you attempted and your overall grade on the exam. The second part gives you information about your answers in relation to a number of specific criteria. You will be able to use this information to get an indication of the strengths of your answers, and the areas you might need to work on. The third part of the feedback gives you some general information about the content of the answers from the class as a whole.

Part 1

You answered questions 1 and 5 (see part 3 of this email for a reminder of the questions). Table 1 shows your grade on each question and your overall grade on the exam. It also gives some statistics that describe the performance of all the students on these questions and on the exam overall (the mean, sd, n, min and max for each of the questions you answered, and overall). For example, for question 1 your grade was 21HIGH, which equates to a numerical equivalent of 68. The average score on that question for the 115 people who answered it was 54.40, with a standard deviation of 7.42, and so forth (using the numerical equivalents for calculation purposes).

Table 1: Overall marks and marks per question answered

N0XXXXX8	Your grade	Num equiv.	mean	Sd	n	Min	max
Q 1	21HIGH	68	54.40	7.42	115	38	74
Q 5	FMARG	38	52.71	9.51	52	32	74
Overall	Low 2.2	52	53.59	7.7	136	31	71

So, your overall grade for the Lifespan Developmental module is: Low 2.2. ***Well done for this good performance on this exam.***

Part 2

We are able to give you feedback about your performance in relation to seven different criteria for each exam answer. Please look at Tables 2 and 3, which show on a scale of 1-6 how you performed on these criteria for each question. A score of 6 is 'excellent'; a score of 5 is 'very good'; a score of 4 is 'good'; scores of 3 and below indicate things that you really need to work on. After you have looked at the tables, read on for some guidelines about how to interpret the different scores.

11

Feeling <u>your</u> exam was marked (feeling included)

N024xxxx	Your Grade	Mean	Sd	N	min	max
Q 1	1LOW (74)	55.27	10.58	56	38	74
Q 2	1MID (81)	57.82	8.94	137	32	81
Overall	1MID (77.5)	56.33	9.43	170	30	78

Table 2: Feedback scores (out of 6) for question 1

Question 1	Your feedback score	Mode (mean) score on this criterion for all answers to this question	Mode (mean) score on this criterion for all answers
Answering the question/ addressing the title	6	2 (3.7)	5 (4.10)
Knowledge and understanding	6	3 3.7)	4 (3.97)
Use of evidence and wider reading	6	3 (3.4)	3 (3.39)
Critical evaluation/ argument	6	2 (3.1)	4 (3.54)
Structure and organisation	4	2 (3.6)	4 (3.87)
Clarity of writing	2	5 (4.6)	6 (5.01)
Length	6	6 (4.7)	6 (5.10)

Table 3: Feedback scores (out of 6) for question 2

Question 2	Your feedback score	Mode (mean) score on this criterion for all answers to this question	Mode (mean) score on this criterion for all answers
Answering the question/ addressing the title	6	5 (4.4)	See Table 2
Knowledge and understanding	6	4 (4.3)	See Table 2
Use of evidence and wider reading	6	3 (3.4)	See Table 2
Critical evaluation/ argument	6	4 (4.3)	See Table 2
Structure and organisation	4	4 (4.2)	See Table 2
Clarity of writing	2	6 (4.9)	See Table 2
Length	6	6 (5.3)	See Table 2

Using grading matrices

Criteria - Q1	Your performance level (out of 5)	
Presentation of a clearly argued and evidenced answer which fully addresses the question. Notably definition and application of 'trust' and 'transparency' and public confidence in the context of this Inquiry	**5 (1st)**	*Excellent knowledge and understanding of the subject. You are able to relate concepts together (synthesise) and you can apply what you know to different contexts.*
Accurate, informed representation of -public accountability -Public service principles, Trust, Transparency Nolan, Lawton etc. -Functions of Public inquiries and this one specifically.	**4 (2.1)**	*Evidence of appropriate selection and application of sources. Very good command of the subject although the analysis could be strengthened in places.*
Demonstration of an appreciation of the wider management considerations relevant to the question. Awareness of the specific circumstances leading to this inquiry. e.g. victim's perspective.	**4 (2.1)**	*Very good demonstration of relevant skills; strong research and analysis of the subject. Highly competent.*
Ability to construct a competently written and structured answer appropriate to examination conditions	**3 (2.2)**	*Competent demonstration of relevant skills to advance argument and evidence. Mostly effective communication of the subject with some aspects requiring more work*

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Specific content-relevant statements

Expected content	Did you cover it effectively?
Effect of soluble factors on T-cell DC interaction	Mostly yes
Costimulation/costimulatory signals (CD28)	Mostly yes
Signals delivered by DC and effect on immune responses	Somewhat
CD4 T-cell subsets (TH1/TH2 paradigm)	Mostly no
Difference between CD4 and CD8 regarding activation of immune responses	Somewhat
Cytokine secretion by effector T cells	Mostly yes

1 = Mostly yes; 2 = Somewhat; 3 = Mostly no

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Statements contingent on mean scores

- Overall, you achieved low scores for **answering the question** fully. To increase your exam grades, make sure you include information for every aspect of the question and try to add more depth and detail to your answers. A summary of what was expected for each essay question is provided in Part 3 below.

- You achieved intermediate scores for **essay structure**. To increase your exam grades spend a few minutes making a plan for each essay, and use subheadings to organise each answer. Use of tables and diagrams is also recommended as a quick way to show your understanding of complex concepts.

- You achieved high scores for **additional reading**. There was evidence of reading beyond the module materials in one or more of your essay answers, showing that you had a high level of engagement with the topics covered in this module. Very well done.

- **NB easy to link to contingent *activities***

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How things used to be…

The notion that one has to express disapproval aloud of his current situation to obtain what he or she desires is absolutely accurate. The three archetypes that elucidate the paramount importance of an appropriate complaints are the book "Happy Now" by Eva Kovalevskaya, Truong Gia Binh – the founder of Vietnam's most successful software corporation, FPT and Tran Hung Dao- the Supreme Commander of Viet's armies in the three glorious resistance wars against Mongol invaders from 1225 to 1286.

To begin with, an impeccable paradigm of power of expressing necessary complaints is the advice of the eminent psychologist E. Kovalevskaya in her best-seller "Happy now". Mrs Kovalevskaya recounts an anecdote in her childhood, when she suffered overprotection of both parents, they never offered her to sufficient freedom in any decisions of life. Then Kovalevskaya solved this predicament by writing than a sincere an letter, explicitly demonstrating her disapproval of their her parents' excessive interventions. Her complaint elicited auspicious changes. In other word, Kovalevskaya's complained to obtain the independence she deserved.

Furthermore, Truong Gia Binh said that he had to send many letters to lawmakers in Vietnam's government to express her & his disagreements with ✓

58   *solid*

Current feedback aims to be:
- Encouraging
- Constructive
- Timely
- Prioritised/strategic…
- …with concrete/do-able recommendations

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A vision for contingent, electronic feedback…

Dear Raj,

Your provisional grade for your recent exam was a **mid 2:1. Congratulations.**

[contextualising text…]

This is how you did on Qu.3.

social model of disability – you scored **5** on this criterion, which is excellent. Have a look at this resource which might take your thinking even further.

constructing an argument – you scored **3** on this criterion. There are good web resources that give advice on structuring essays. Here's one from MIT.

etc. etc.

Dear Sam,

Your provisional grade for your recent exam was a **high 3rd. You may be a little disappointed with this result, but well done for passing the module.**

[contextualising text…]

This is how you did on Qu.3.

social model of disability – you scored **2** on this criterion, which means you need to work on your understanding of this area. Have a look at this resource which might help.

constructing an argument – you scored **2** on this criterion. There are useful web resources that give advice on structuring essays. Here's a good resource from Sussex.

Benefits of this approach

For the student

- ✓ they value the feedback

- ✓ they get an indication of how to improve performance on their next exam

- ✓ they are *included* more in the assessment process

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Appreciation, quality, usefulness…

I was very pleased to receive such detailed individual feedback I was able to see where I performed well and where I underperformed and I feel that this will be extremely useful in not only my examinations in the coming year but also any essays or exam type questions that I have to work on. Thank you very much for your time and help.

[received some feedback on exams at A level, but] this feedback is much more helpful and I will definitely use it when working towards my next exams.

I think this is a brilliant idea and allows students to really see where they have gone wrong. I personally struggle with exams compared to coursework so I've found it really useful to see exactly where I went wrong in relation to the exam. Thank you :)

Individual feedback is a great idea, always wondered why universities don't do it…. if they want to help their students then giving them feedback is the way! How are we supposed to flourish if we don't know what we have done right or wrong? I know it takes time, but everybody deserves to be given feedback… thank you very much!! I really appreciated it.

Active participation

From the feedback, what is the single most important thing for you to work on in preparation for your next exam?

- *Read the question properly and focus on it!*

- *structure and organisation!*

- *I need to make my answers much longer, something I have always struggled with. I also need to demonstrate further reading in my answers as both of these things capped even my highest mark (which i thought was pretty decent for me!).*

- *Essay practice, in terms of, answering the question, avoiding waffling and instead getting straight to the point. Also working on my structure in a time limit.*

- *More critical evaluation*

- *do more further reading to help to achieve 5/6*

- *Answering the question properly and referring to external evidence*

- *relevancy. making sure I critically evaluate my answer and create a well balanced argument.*

- *i need to expand on and show more evidence of wider reading*

Benefits of this approach

For the marker /module leader

- ✓ disciplined approach to criteria-setting

- ✓ increases marker confidence

- ✓ facilitates development of clear framework for decision-making

- ✓ <u>every</u> (sic) marker agrees it improves their marking!

- ✓ no manual grade entry - reduced error, and significant time-saver

Benefits of this approach

For the course team

- ✓ supports local moderation (explicit justification for grades)

- ✓ module leader receives additional information about performance per question and per criterion

- ✓ all marking judgments, feedback, and statistical information are easily shared with moderators and external examiners

- ✓ specific unambiguous praise for the system from external examiners
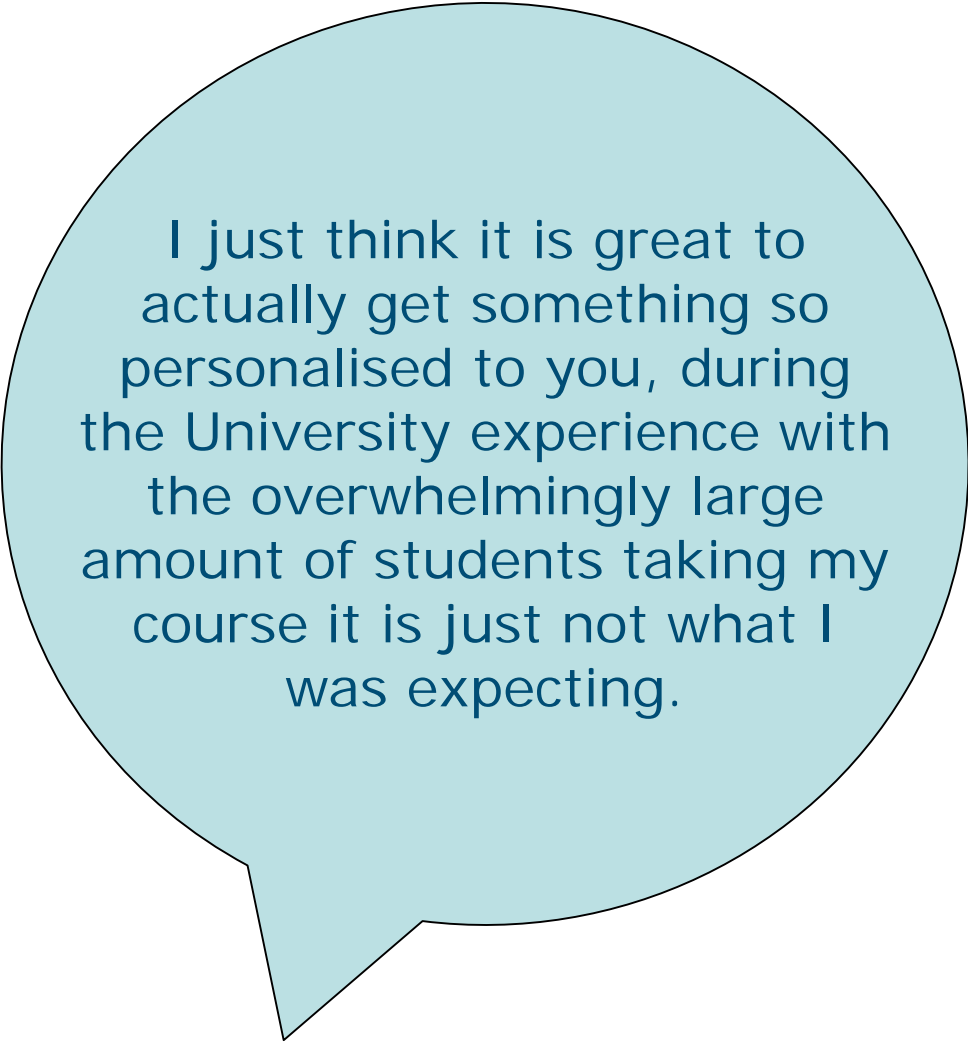
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Costs of this approach

Administrative and up-front planning

- ❖ Front-ended setting up costs (with enduring benefits)

- ❖ Current system is a 'proof of concept' – not a portable package

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Current work

- Currently being piloted around the university
  - *I love the portability of it*
  - *feeds into the University policy of supporting flexible working and those individuals who use this policy to fit in caring responsibilities...feeds into our Athena SWAN application*
  - *I am really impressed with how this looks, and the amount of information students receive...I hope this is something we can consider for next year... we are likely to have a larger cohort so time implications could be important*
  - *Getting through the scripts efficiently after the scripts being delayed by nearly a week in getting to us is in big part thanks to the online form being easy to use*
  - *I love it!!!!!! It is so excellent, I am really pleased...is soooooo efficient and easy*
  - *I just wanted to let you know, that [the external examiners] are very impressed with the feedback and online marking and will put it forward as best practice*

- Enhancing interactivity, dialogue, 'contingent teaching'

- Needn't be restricted to exams: real-time judgments
  - Real-time grading of presentations and practical work
  - e.g. Biology lab competency test for 350+ students
  - Grading of anything, really...

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I just think it is great to actually get something so personalised to you, during the University experience with the overwhelmingly large amount of students taking my course it is just not what I was expecting.