Ask not what CAA can do for your career, but what you can do for assessment

Or: Ask not what is technologically glamourous, but what is useful to assessment.

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www.psy.gla.ac.uk/~steve/talks/caa.html

Preface

This is a reactionary talk, although a sensible reactionary talk.

CAA doesn't seem to have achieved a transformation. Why not?

If we were radical, we'd assume reactionary forces were blocking it, and we would be attacking them.

A different account comes from David (1990); and the parallel with electric motors:
1880 the key inventions
1900 clear prediction of productivity revolution
1920 (only) 50% of uptake finally reached.

Just wait?
The amount of work to tailor the idea to each case of use.
The expertise required to do this tailoring.

Preface

As it is, perhaps we should just try to do our basic software engineering better and do proper requirements gathering, identification, analysis.

This talk visits a number of problems with old assumptions, and some cases where really doing the requirements gathering has paid off to a surprisingly degree in CAA.

Part 1:
Is feedback important for learning after all?

If so, when?

Giving it, not receiving someone else's?

For procedural (skill) content, not declarative (factual)?

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Cases in point

No correlation between overall course satisfaction and feedback
My dept. gives NO feedback on its content modules; only on "skills"
"Catalytic" effects suggest that others' interaction IS important, but is NOT feedback (diagnosis or remediation information). Draper 2009a
In RPC what learners most value is just seeing others' work Morrow 2006

Learning maths by doing the exercises and checking the answers in the back of the book.
Learning to program: mostly by trying things out. (but forums)
Getting better at anything with solo practice.
Students (with A grades) who say they never learned anything from feedback.
Sugata Mitra: no teachers, learners self-organise. Mitra URL
Chi 2008: learning from watching a video of a tutorial.

Conclusions

Most learners, most of the time do not need a tutor to diagnose where they went wrong, nor to tell them how to get it right.

Either feedback isn't important; or it isn't mainly personal tutor comments that matter.

When non-tutor feedback *is* important, it is often in self-generated activities: so we don't need teachers for that either.

If assessment (and so CAA) is important, it is not because of a connection with feedback.

=>
We should be addressing assessment, not feedback

Interlude A: Definitions

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Definitions

Warning:
there are numerous distinctions we usually feel go together. E.g.:

Formative assessment, increasing learning outcomes, benefiting the learner, open-ended comments, qualitative measures.

Summative assessment, judging learners, numerical marks, quantitative measures.

But actually they (and their opposites) occur in all combinations.

e.g. I will be mentioning:
Better quantitative help for learners to understand marks formative purposes.
Just knowing when you are wrong is all most learners need in order to self-correct.

Part 2: Don't pretend assessment helps learners
(we do it for other stakeholders such as employers)

Task analysis: how do employers make selection decisions;
How better to support this task?

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Rowntree's 17 principles

In 1977 Rowntree listed 17 principles of good assessment practice.

Very, very little progress has occurred in the last 35 years.

The only ones which my department, at least, has implemented have been forced on us by legislation.

(A terrible indictment of academics as professionals w.r.t. assessment.)

They'll still do nicely as a ToDo list of goals for assessment: ….

Rowntree's 17

1. Articulate the assessment criteria; including trying to express our implicit constructs.
2. Use more varied assessment methods. Make them educationally relevant.
3. Give credit for what learners learned, as well as if they learned what we intended.
4. Assess "naturalistically" i.e. use assessment processes and products that are themselves educationally valuable.
5. Give learners maximum feedback (not just a grade or rank, but summative of their traits/qualities).
6. When criteria are judgmental, say (to learners) whether their performance is being compared to norms, criteria, our expectations, or their own previous performance.
7. Colleagues may have quite different perceptions.
   - Accept this, don't converge unnaturally; report divergence.
   - Give back exam scripts.
8. Resist drifting to criteria that attract consensus marks: stay with the educationally relevant ones.
9. (√) Support portfolios: products and assessments from many peers and self, ...

Rowntree's 17 (part 2)

10. √ Report results only to learners (i.e. not made public). [Data protection act.]
11. a) Focus on eventual, not average or early, state
    b) Emphasise learners' strengths, but mention weaknesses.
12. (√?) Don't conflate i.e. no portmanteau grades.
    Prepare a multi-dimensional profile: with considerable narrative content
13. No pass/fail except for professional competence certification. (The reader of the report should make the judgement of how good is good enough.)
14. √ No comments in confidential references that you wouldn't have learners read. [Freedom of Information]
15. Be explicit in references that the assessment is about specific things; that it is not about permanent qualities; require that you are given some understanding of how the reader will use the report; get the relevant qualities from the requester.
16. If we predict learners' future qualities, follow up and see how right we were(n't).
17. Give health warnings on certificates (transcripts) i.e. about the limits on how much weight to give accreditations as a measure of the person.

Part 3:
Pretending the field of e-Assessment has a single agenda doesn't help

The field of e-Assessment is the intersection of different research fields with QUITE different agendas

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Fields intersecting in CAA

The point is, each (sub-)field has its own traditions, career structures, enthusiasms.
Most important: for each field, ask what their criterion of (research) success is. They do NOT all want the same thing, really.

If we are to design, introduce, and roll out innovations surely we must first commit to what task it is we want to implement, and what our measure of success is.

Here's a list of such sub-fields: .....

Fields intersecting in CAA (2)

A. Assessment reformers: what is wrong with standard practices
B. Feedback improvement artists
C. Learning and teaching researchers:
   evidence-based improvements in learning outcomes
D. Cost benefit analysts: cost reductions should be attainable and transformative

E. E-learning optimists and innovators: what's new, what's cool:
   reaction time tests on iPads at random times; using Wii for assessment ...
F. Task-artifact cyclists: most technology has its important uses discovered only after introduction, not by designers e.g. SMS.
G. Technology Cassandras: storing data on learners from their home computer, school computer, ...

Part 4:
Making marks useful to learners

Learners look at marks; usually ignore feedback comments.

Marks may be summative assessment, but nevertheless students try to use them.

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2-Dim feedback

Normative help: how does your mark compare to the rest of the class?
We can't now publish the list of marks; but could show the distribution; or perhaps a normalised ranking: e.g. which of the 10 bins of ranks are you in e.g. between the top 20-30% of the class.

Ipsative help:
How does this mark (or rank) compare to your previous marks?
How do these comments compare to your previous comments?

ICT is a big help here (though you won't win any CompSci prizes)

Part 5:
Learner-centered analysis

What do real students use marks for?
— Regulating their effort, above all.

In general: what tasks do students use feedback /marks for?
Find out; then design CAA for this.

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Some student uses (tasks) for feedback

Revising the current product (doing corrections)

Learning: improving future process and products (fprompt supports this)

Self-regulating effort (2dim feedback would assist this)

Deciding what subjects to take in future / next.

Deciding the quality / validity of the marker

Deciding the quality / validity of the marking process (it's just random)

(See Draper 2009b)

Interlude: The super-principle of learner and teacher equal importance

As Laurillard's model embodies, teachers and learners are equally important in the learning and teaching process.

None of this Learner-centered nonsense: which is as stupid as saying you will focus on the left-side wheels of your car because they are so neglected ... (Poor old lefties, they need special anti-clockwise thread nuts for their special needs .....)

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Part 6: Teacher-centered analysis

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What is the task that the tutor is actually doing when marking?

Orsmond / Plimmer

These 2 papers both claimed their medium (audio, digital ink respectively) was much better for feedback. Reading them together, it seemed clear to me that it wasn't the media: it was that making marking easier for the tutor immediately elicited more feedback (for the same effort) so learners benefitted.

Doing serious luxury programming for teachers may be the best thing we could do for learners.

Conclusion: follow Plimmer and do a detailed task analysis of what the user (the tutor) is actually having to do.

(Describe Plimmer)

What is the task am I actually doing when marking?

(Marking essays) —> multiple audiences, multiple output documents

a) Communicating to the dept. by writing a mark on the marksheet
b) Writing comments to the student on the pro-forma feedback form. Answering their prefaced questions (elective feedback).
c) Writing comments to myself giving a rationale for the mark; for resolution discussions with the second marker.
d) Writing notes to myself to follow up on the content if they spark an idea (not unusual in my final year option classes).

e) When allowed, writing on the script as well as separate overall comments.

What is the task that the tutor is actually doing when marking?

Some existing software, besides Plimmer's, supports some of this e.g. Turnitin's GradeMark.

.....

Orsmond / Plimmer ....

I think there is more mileage in this line of reasoning; and others in fact have published lines of thought like this:

Taras, Hanscomb

Conclusion

Old implicit ideas about assessment have obstructed progress in CAA.

Identifying the real underlying requirements may be the way forward.

A place to stop

- Questions?
- Does anyone agree with anything I said?

For the slides, handout etc. see:

http://www.psy.gla.ac.uk/~steve/talks/caa.html

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