Performance-based Learning...

The TopGear Approach*

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*Good guidance for an excellent discussion with international experts (or for that matter, any teaching session)

✓ Select one (and only one) model; make sure it is familiar to all and not too controversial
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• TG is currently the most widely watched factual television program (per Wikipedia)
• Part of its success is that it appeals even to people who don’t know much (or even care much) about cars
• Host trio known for being - depending on perspective - bitingly honest and/or politically incorrect (to the point of diplomatic difficulty)
My complicated love for Top Gear

MELISSA KITE • DAILY MAIL • JULY 01, 2013 11:03AM

Canadian Rockies By Train TravelAlberta.us/Train
Experience the Rockies By Train. Luxury Mountain Travel By Rail

MOST VIEWED
1. Julia's woeful reign ended in farce
2. Rudd-led Labor changes the contest
Objectives

By the conclusion of this session, the engaged participant will be able to:

1. Describe the role of the various components of typical teaching evaluations
2. Identify other sources of teaching effectiveness data
3. Postulate methods for triangulating teaching effectiveness data
Can’t we use dashboards in teaching, too?
Classroom teaching…

“…is perhaps the most complex, most challenging, and most demanding, subtle, nuanced, and frightening activity that our species has ever invented.... The only time a physician could possibly encounter a situation of comparable complexity would be in the emergency room of a hospital during a natural disaster.”

- Lee Shulman
So how do we know whether our teaching is effective?

• ... we’re brilliant scientists; of course it’s effective!
• We use a system of explicit/tacit performance indicators:
  1. Self evaluations of teaching (Selfies)
  2. Student evaluations of teaching (SETs)
  3. Peer evaluations of teaching (PETs)
    • Direct and indirect
  4. Linked student performance outcomes (Triangulation)
    • Between exam items and learning objectives
    • To subsequent courses
    • To gatekeeping assessments
Selfies - “Know thyself”

For another historic (and somewhat amusing) example, see -

http://www.unc.edu/~tbrock/
SETs = The Cool Wall

- Seriously Un cool
- UN COOL
- COOL
- SUB-ZERO

Erm... isn't that just a 4-point rating scale like the ones we use for teaching evals?
“...as bland as a cheerful status update or as cruel as online bullying”

Red doesn’t suit you.

You look great in red!

That’s not what Dr. Oz says.

Did you cut your hair?

What is the role of learner satisfaction in education?
Is satisfaction deadlier than a car crash?

- Prospective cohort study of adult respondents (N=51,946) to the 2000-2007 MEPS Survey.
- Satisfied patients:
  - More adherent to physician recommendations
  - More loyal to their physician
  - Less emergency department use
  - More inpatient hospitalizations
  - Greater prescription drug expenditure
  - Greater total health care expenditure
  - HIGHER MORTALITY (26% higher)

tripadvisor model vs Uber model

- The guests rate their experiences
- The hosts can offer a rebuttal (or an apology)
- The passenger rates the driver
- The driver rates the passenger

TRANSPARENCY puts you in pole position!
PETs = Using your “pit crew”

Consider expanding your pit crew
http://medschool2.ucsf.edu/academy/faculty_development/tip-top.aspx

Does peer review include only those within one’s discipline?
Indirect PETs

- Reviews from continuing professional development exercises
- Funded educational projects
- Requests for service as journal reviewers, grant reviewers, external reviewers, etc.
What if the various evaluations differ widely?

• The Big Bang Theory – Selfie, SET, PET of Sheldon’s teaching
  – http://youtu.be/Ws5tZ59JDDk

If you liked this one, you might also like...
The Big Bang Theory - Sheldon's intro lecture
http://youtu.be/hm87ZLMMFss
CASE STUDY
Teacher in a reasonably-paced course

• “They liked me.”
• “They did okay on the exams (when they were constructed primarily of conventional items).”
• But something wasn’t right...
  – “Conceptually, they just didn’t get it.”

Eric Mazur, PhD
Harvard University

http://www.youtube.com/watch?v=WwsIBPj8GgI
• Correlate confusion with correctness...
  – Pre-session “reading”
  – Web-based surveys
    • 2 (difficult) conceptual questions on content
    • 1 question on feedback
      – Please tell us briefly what points of the reading you found most difficult or confusing. If you did not find any part of it difficult or confusing, please tell us what parts you found most interesting.

Novak et al., Just-in-Time Teaching: Blending active learning with web technology (Prentice Hall, 1999).
Diagnostics

• Mazur’s physiologic study shows that only 2 activities other than death cause the brain to flatline - watching television and listening to an academic lecture.
  – Instructors are often praised by learners for “clear” lectures
  – Confusion is discouraging (especially to those who may never have had the opportunity to struggle at anything), but “to wonder is to begin to understand.”

Horton, BMJ, 2013
Who is The Stig?

- Afraid of bells
- Voice can only be heard by cats
- Naturally faces magnetic north
- Only knows two facts about ducks, and both of them are wrong
- Has a full size tattoo of his face, on his face
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😊 Distribute cool car STICKERS to reinforce the message!
The plural of anecdotes is not data.
Attributed to Lee Shulman

Compiling the various teaching and learning evaluation data points into a cohesive dashboard makes it easier for teachers to do the right thing... but it’s how they/we use this performance information that matters.


