

Programme and Cycle Evaluations @ EPFL




Evaluation Yes, but by Whom?

- Student Evaluations of Teaching are widely used...
- ...and known to be problematic
 - Not correlated with learning (Uttl et al., 2017)
 - Evidence of Gender biases (Boring, 2017)
 - Risks associated with publication (Jones et al. 2012)


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Meta-analysis of faculty's teaching effectiveness: Student evaluation of teaching ratings and student learning are not related

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ABSTRACT

Student evaluation of teaching (SET) ratings are used to evaluate faculty's teaching effectiveness based on a widespread belief that students learn more from highly rated professors. The key evidence cited in support of this belief are meta-analyses of multisection studies showing small-to-moderate correlations between SET ratings and student achievement (e.g., [Cohen, 1980, 1981](#); [Feldman, 1989](#)). We re-analyzed previously published meta-analyses of the multisection studies and found that their findings were an artifact of small sample sized studies and publication bias. Whereas the small sample sized studies showed large and moderate correlation, the large sample sized studies showed no or only minimal correlation between SET ratings and learning. Our up-to-date meta-analysis of all multisection studies revealed no significant correlations between the SET ratings and learning. These findings suggest that institutions focused on student learning and career success may want to abandon SET ratings as a

Are students good at recognising when they are not learning?

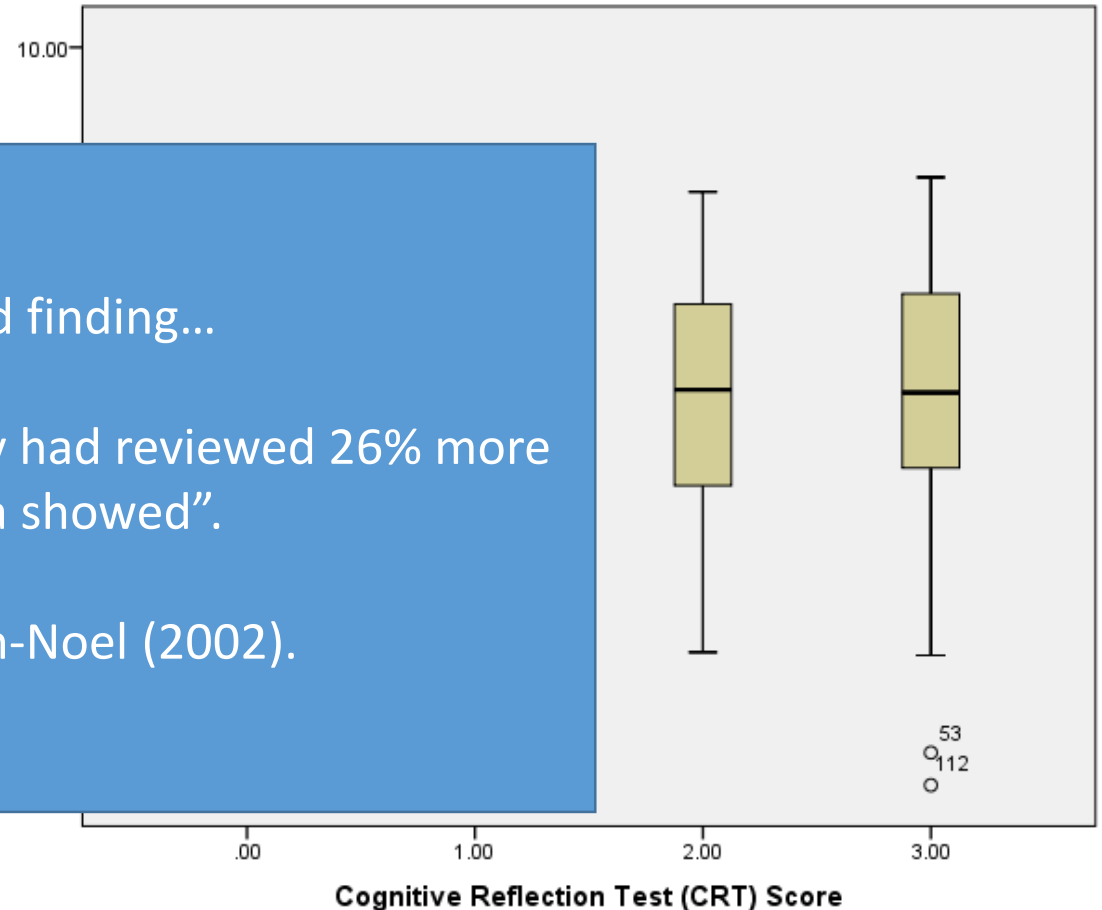
169 2nd year Computer Science students

Two instruments:

- **Objective** measure of student learning (Winne & Jamieson-Noel, 2005)
 - Short problems with solutions that were incorrect
- **Subjective** measure of student learning (Problem Solving Scale, Winne & Jamieson-Noel, 2005)
 - I ask myself if I have learned after I solve a problem
- Self report (Reflective Problem Solving Scale) correlated with objective measure

- **...although many students are weak at monitoring their work, they are not particularly aware of this weakness**

Not an isolated finding...
“Students estimated that they had reviewed 26% more than trace data showed”.
Winne & Jamieson-Noel (2002).



Maëlle Colussi, Audrey Cuenin, Ting-Hsuan Lee, and Joana Machado (2014) Do student know enough about their learning to tell us about it? HPL Project

Looking to other methods – Multidimensional evaluations

Career Framework for University Teaching

Developed by UK Royal Academy of Engineering

Teacher has control over deciding the appropriate measures

Subject to review

<http://www.evaluatingteaching.com/evidence/>

Home About Spheres of impact Promotion criteria **Evidence** Resources Next steps

Self assessment Professional activities Measures of student learning Peer evaluation

Evidencing teaching achievement

There is a range of different forms of evidence that could be used by a university academic to demonstrate their teaching achievement, highlighting both their approach and impact. These forms of evidence have been grouped into four broad domains:



Self assessment



Professional activities



Measures of student



Peer evaluation

Evidence-based benchmarking of practices

Teaching Practices Inventory

Carl Weiman

- Are goals clear?
- Do support materials support learning?
- Are evidence-based pedagogies used in class?
- Nature of feedback?
- Are assistants trained and guided?
- ...

THE CHRONICLE OF HIGHER EDUCATION [NEWS](#) [OPINION](#) [DATA](#) [ADVICE](#) [JOBS](#)

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TEACHING



Everyone Complains About Evaluations. A Nobel Laureate Offers an Alternative.



Take away messages

- Student Feedback has a place but...
 - In context of other types of evidence
 - The body or person responsible must own the process
 - Use objective measures where possible

Context

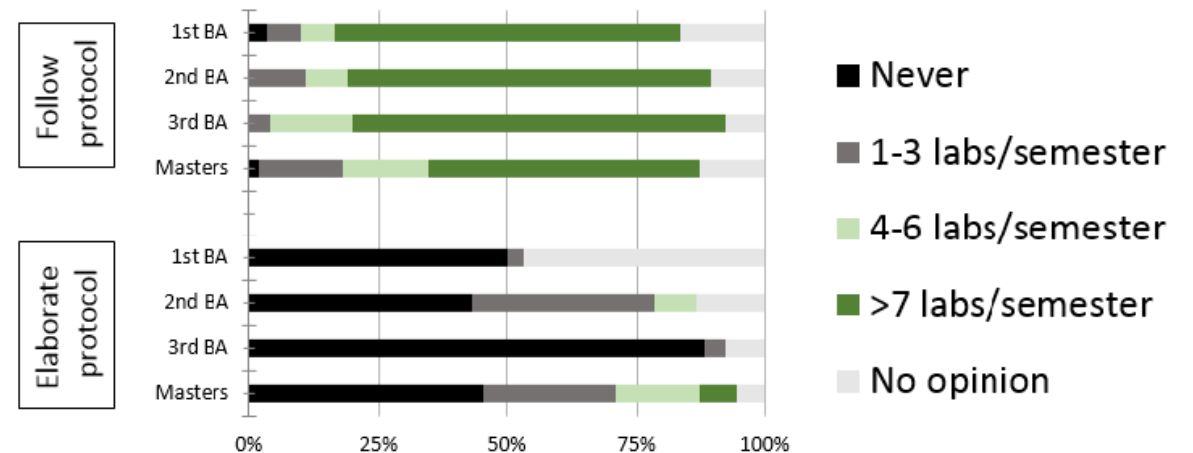
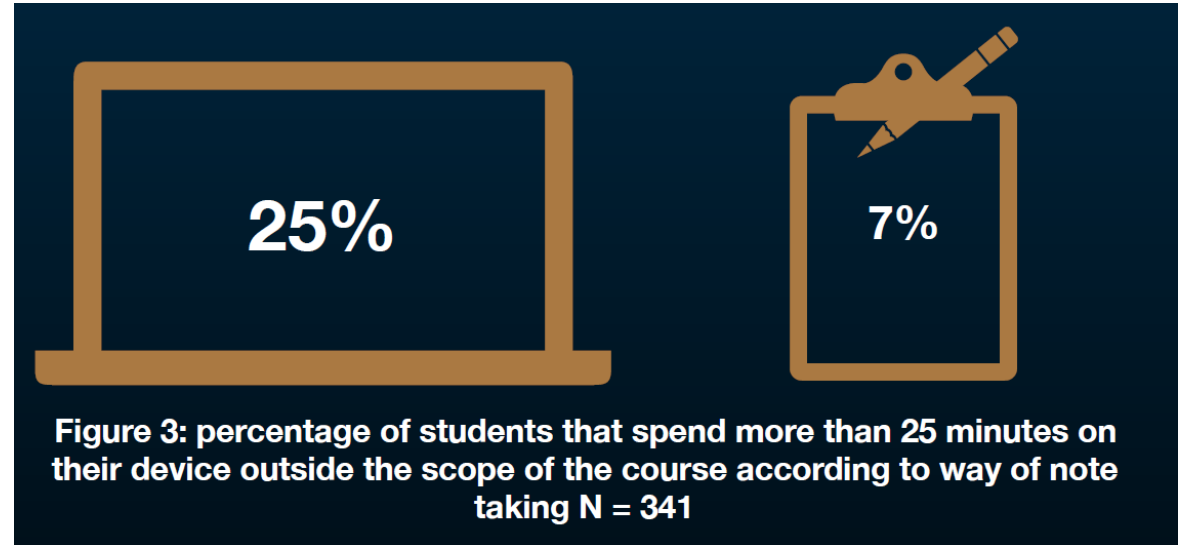
- 2011 Campus II survey showed student satisfaction with courses was high, but satisfaction with programmes was lower
 - Student feedback on cycle/programmes proposed
- 2014 CTI-QAQ Quality Audit recommended the development of systems for stakeholder feedback on quality of programmes
 - EPFL proposed to develop the capacity to collect data for programme improvement
- 2017 Pilot project to test different approaches for student feedback on programmes/ cycles
 - Chemistry and Chemical Engineering
 - Environmental Sciences and Engineering

The pilot project

	Ba CGC	Ma SIE
Participants	Year 2 and Year 4 students	Graduates from 2006-16 (circa 500)
Response rate	Over 95%	38%
Mode	Paper questionnaire, Spring Semester	On-line questionnaire, Early summer
Focus	<ul style="list-style-type: none">• Basic skills required for later courses• Information needed to navigate the programme• Programme coherence	<ul style="list-style-type: none">• Coherence of knowledge and skills within the domain with their work• Sufficiency of professional/transversal skills

Other sources of evidence...

- Student note taking (2018)
 - 341 students
 - Survey on note taking/ electronic device use
- Lab practices (2017)
 - Protocol elaboration vs protocol development
 - <20% had feedback on “thinking in the lab” or “problem solving”
 - Most common feedback is on report writing
- Student authored learning outcomes (2017)
 - Overlap and differences with teacher authored learning outcomes



Key proposals

- Build a feedback ‘machine’ that can be driven by the section
 - Alumni feedback, once every 6 years
 - Student feedback, once every 3 years
- On-line, standardized yet customizable questionnaire
- Section will drive design, data analysis and follow up on reporting
 - Pedagogical specialist/data analyst to support them
- Supplemented with other sources of evidence