

Assessment research influencing educational practice

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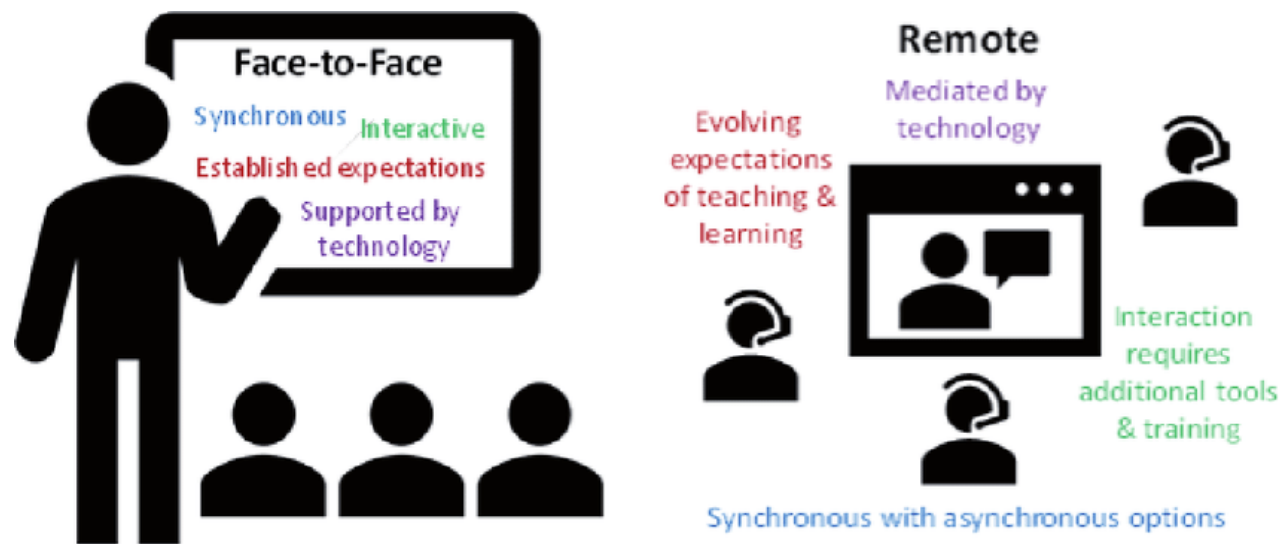


Centre for Research in
Assessment and Digital Learning



Overview

1. My context
2. Changes in the history of assessment
3. The slowness of change
4. How does research influence practice?
5. An example of a particular model
6. Some unresolved issues



1. My context

- Centre for Research in Assessment and Digital Learning (CRADLE)
- Focus on higher education, not schooling
- Dual focus on research and the educational practice of the university
- None of the core staff of CRADLE are assessment specialists or primarily quantitative researchers, but backgrounds span research and academic development
- Deakin University is the top Australian university for research in higher education

2. Changes in the history of assessment

Where have we come from in assessment?



History of assessment

- From personal patronage to examinations for selection (BCE in China)
- From exclusively oral to written assessment in the West (18th/19th century)
- From ranking students to classing/grading students (early 20th century)
- From terminal exams to a variety of assessments over time (1960s onwards)
- From secret weightings to revealing them to students (1970s onwards)
- From a normal distribution to marking by achievement (1970s onwards)



More recent changes

- From assessment using artificial items to authentic tasks (from 1980s onwards)
- From assessing knowledge of subject content to assessing learning outcomes (2000s onwards)
- From paper-based assessments to digital approaches (2010s onwards)

3. The slowness of change

- What led to these change?
 - How much comes from within education? How much from external influences?
- Most educational institutions live with assessment practices discredited for many years (norm referenced, over precise, don't address outcomes, etc.)
 - But no one seems concerned!
- Assessment is not driven by evidence, but by myths and conventions (disciplinary and otherwise)
 - It is common for assessment practices to be justified with respect to policies which are no longer exist (if they ever did)!

Why is the uptake of assessment changes so slow?

- Disconnect between research and scholarship and educational practice
 - Researchers don't focus on problems that concern practitioners, and if they do, they use approaches that practitioners don't understand
- Disconnect between policy and educational practice
 - High inertia: common to see assessment practices in disciplines/departments that directly contradict university policy
- It is not fair to blame teaching staff, especially when they are so poorly trained
 - Of course, training should be improved, but much more effort is required on knowledge exchange
 - Except in medical faculties, it is rare to find anyone with assessment expertise of any kind

4. How does educational research make a difference?

- The results of empirical research rarely change anything
- Research and scholarship change the discourse and provide useful language with which to discuss issues
 - It focuses on things of significance and gives them meaning
 - It draws attention to particular, neglected, issues
- The separation of research from practice is profoundly unhelpful
- Investment in R&D in education is disproportionately small compared to the size of the industry

5. What do we need to attend to?

- Building strong links between research practice and assessment practice—involving real dialogue
- Researchers understanding the concerns of teachers, course designers and those accountable for courses
- Designing research that engages with problems that practitioners actually face (eg. workload, feedback that doesn't influence learning, ...)
- Less arrogance on the part of researchers/More openness on the part of teachers
- But where do we find the researchers to do this?

A case study: CRADLE

- Not proposed as an ideal, just how we approached the problem in one university
- The context:
 - Deakin University is both fully f2f and fully online
 - Spread across four campuses in three cities
 - Extremely diverse intake
 - Deakin University consistently gets high ratings of student satisfaction
 - 'if we are good at teaching, we should be good at researching it'

Centre for Research in Assessment and Digital Learning (CRADLE)

- Not located in a Faculty, but in the portfolio of the Senior Deputy Vice-Chancellor Academic
- What does the dual focus imply?
- Unlike many central units we don't do academic development as such (there is a much larger group that does this)

CRADLE research themes

All in higher and professional education:

- Assessing for learning
- Learning in a digital world
- Learning through, and for, work

<https://blogs.deakin.edu.au/cradle/about/>

CRADLE research programs

- Assessment security and academic integrity
- Feedback and feedback practices
- Representation in and beyond assessment
- Learning in, and for, the workplace
- The digital world and its impact on learning and teaching
- Developing students' evaluative judgement
- Inclusion and belonging in a digital world

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Characteristics of CRADLE research

- Only take on projects that aim to make a difference, not necessarily immediately
- Limited themes for our work in a limited sector
- Themes remain constant, programs change slowly
- Unlike the broad range in Schools of Education, we only pursue projects tightly connected to our themes, and only recruit those who can contribute to them
- Interventions are conducted in real settings in regular courses
- Theoretically diverse

CRADLE research take-up strategies

- Choice of research topic and approach
 - Of strategic importance even if not yet reflected in University strategy
- Use of internal CRADLE Fellowships
 - Deakin academics who are good educational practitioners and good researchers seconded part-time to the research group to work on something that will change courses, with \$20,000 each
- Use of internal Development Partners Scheme
 - Take an area of research and implement strategies in a pivotal unit in all Faculties, with smaller funding
- Collaboration with external agencies
 - Link with for example, quality agencies on discussing new developments, eg. TEQSA and genAI
- Good internal dissemination mostly through existing channels with some other seminars/workshops
 - CRADLE Suggests ... series, design products, blogs

Pause for questions/comments

6. Examples of unresolved issues in assessment practice

Researchers cannot fix these alone!

1. Assuring and reporting on learning outcomes
2. Assessment as a program responsibility
3. Eliminating spurious levels of accuracy
4. Portraying what students can do

LEARNING



ASSESSMENT



Assessment and learning

- Effects of assessment on learning are well researched
- Many common assessment practices
 - have negative effects on learning
 - give students distorted messages about what is important
 - don't adequately assess what students can do
- But, substantive changes have been modest

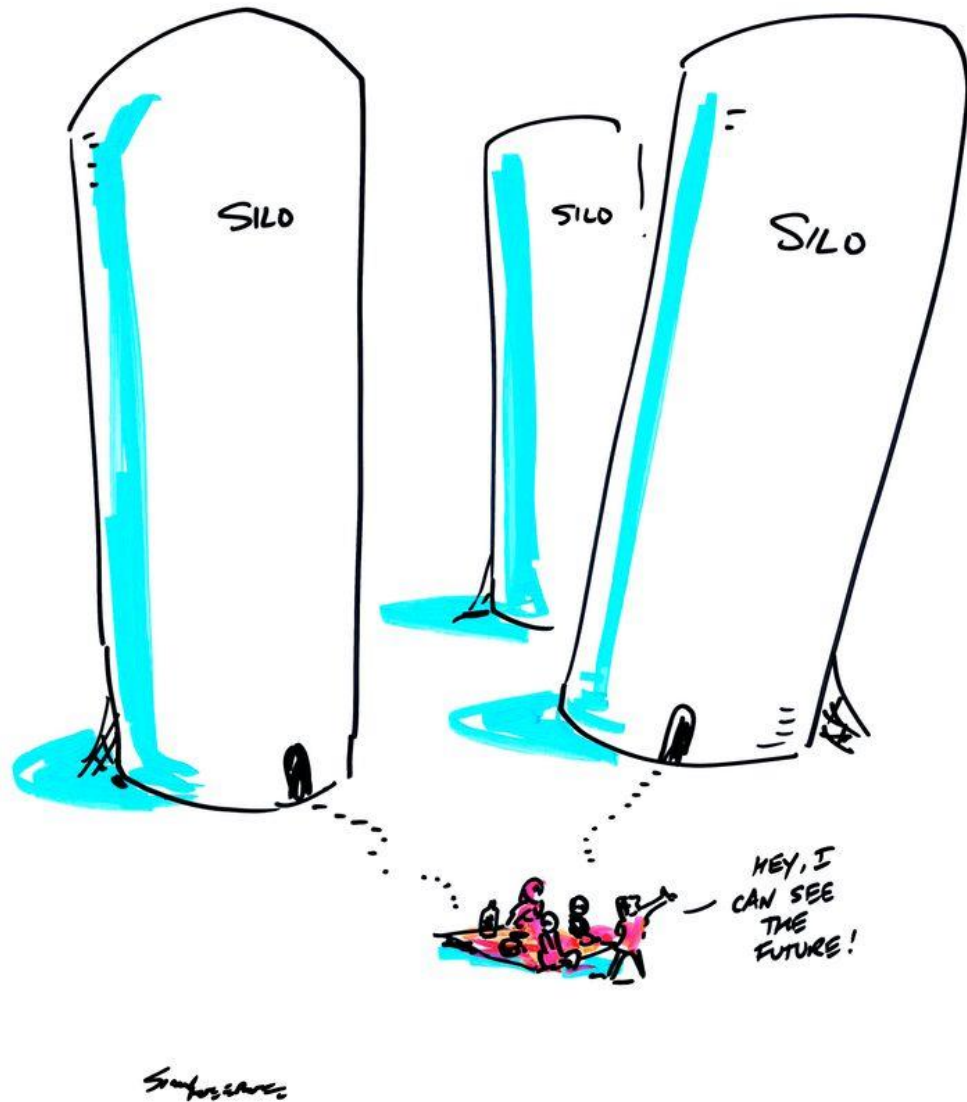
1. Assure and report learning outcomes

The solution

- Take learning outcomes (LOs) seriously
- Assure that all students meet the threshold standard
 - Poor performance on one LO cannot be balanced by exceeding thresholds on others
- Formative assessment moves students towards meeting learning outcomes.
- Aggregation of marks only permitted within a given LO
- Results recorded and reported by LO, not by subject



2. Assessment as a program responsibility



The problem

- Assessment sits within subjects
- Curriculum mapping shows some program LOs over-assessed, others lightly, if at all
- No one takes overall responsibility for assuring program learning outcomes
- Greater emphasis is given to subject LOs at the expense of the program LOs
- Professional bodies concerned—students not prepared across full range needed for practice

2. Assessment as a program responsibility

The solution

- Assessment for assurance accepted as a program/coursewide responsibility
- Formative assessment sits within subjects
- Curriculum mapping ensures all program learning outcomes pursued, supported and reflected in assessments
- Volume of summative assessment activities reduced

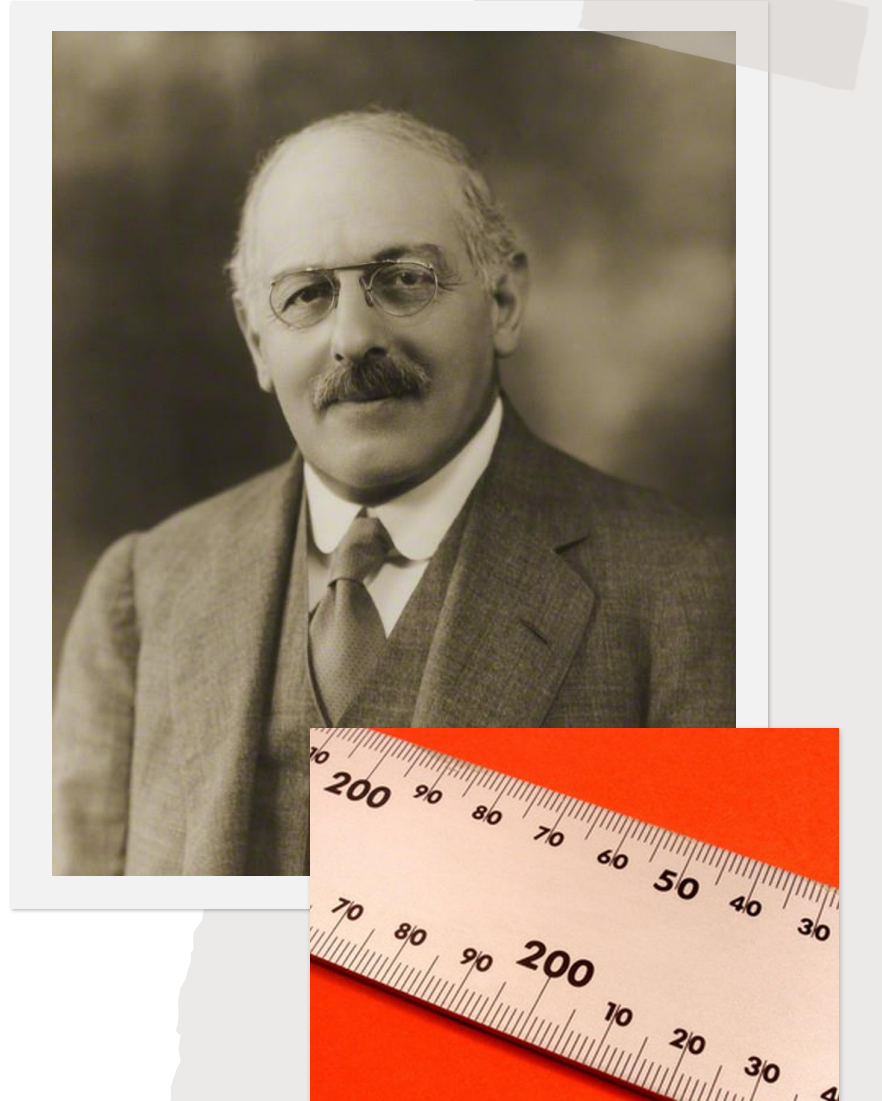


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3. Eschew spurious levels of accuracy

The problem

- Student results are reported to an unachievable level of accuracy
- Known since the 1930's that essay-type tasks cannot be marked more accurately than, say, four passing grades
- 100 items in a test does not mean that student performance on learning outcomes can be reported to percentage accuracy!



3. Eschew spurious levels of accuracy



The solution

- Marks and grades never reported more accurately than measurement allows
- The number of passing grades is reduced to, say, four
- Averaging grades across learning outcomes avoided
- Information campaigns instituted to explain basic notions of assessment accuracy for staff and students



4. Portray what students can do

The problem

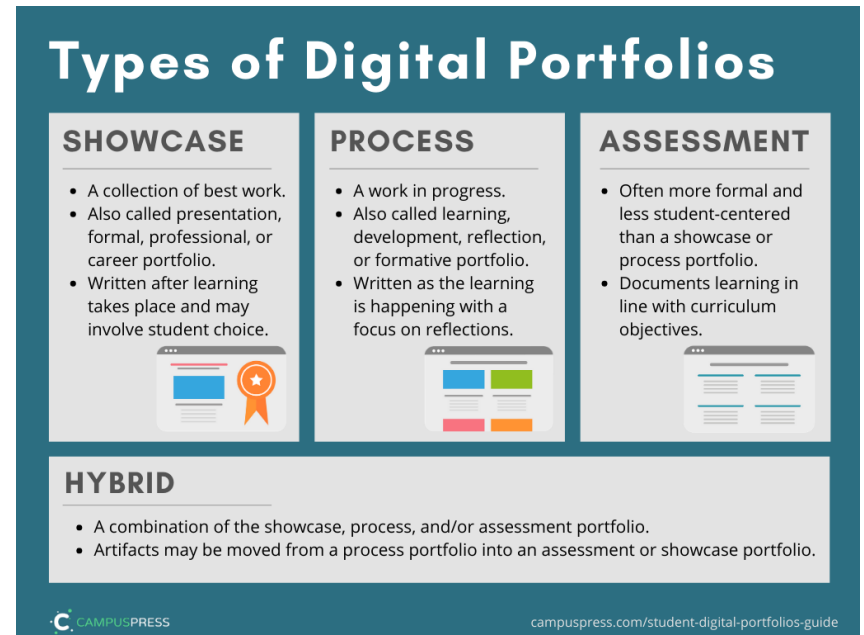
- Transcripts aggregate results by subject/unit title
- These are an abstract code
- Unable to be decrypted to discover what a student did to achieve the result



4. Portray what students can do

The solution

- Transcripts aggregate results by program learning outcomes
- Transcripts take the form of validated digital credentials.
 - click through for tasks that students can perform in each area and criteria used to judge them.
- Students curate portfolios of achievements in forms suitable for their desired audience



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Questions and discussion

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Assessment Reform for an Age of Artificial Intelligence

Guiding principles

- I. Assessment and learning experiences equip students to participate ethically and actively in a society where AI is ubiquitous
- II. Forming trustworthy judgements about student learning in a time of AI requires multiple, inclusive and contextualised approaches to assessment

Propositions

Assessment should emphasise...

1. ... appropriate, authentic engagement with AI
2. ... a systemic approach to program assessment aligned with disciplines/qualifications
3. ... the process of learning
4. ... opportunities for students to work appropriately with each other and AI
5. ... security at meaningful points across a program to inform decisions about progression and completion