



# **Developing assessment for a 21st Century higher education**

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# Reasons to rethink assessment methods

- Meeting the different **purposes** of assessment
- **Valid** assessment – alignment with **the** aims for a 21<sup>st</sup> century education
- Taking a **program** approach
- Student **involvement** in assessment
- Practicability / marking load for faculty

# Purposes of assessment

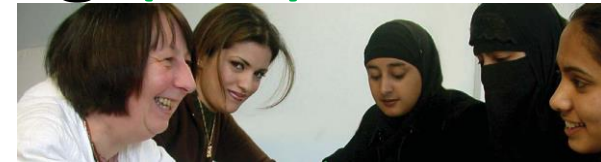
- Certification (of learning)



- Quality Assurance (of)



- Encourage effective learning (for)

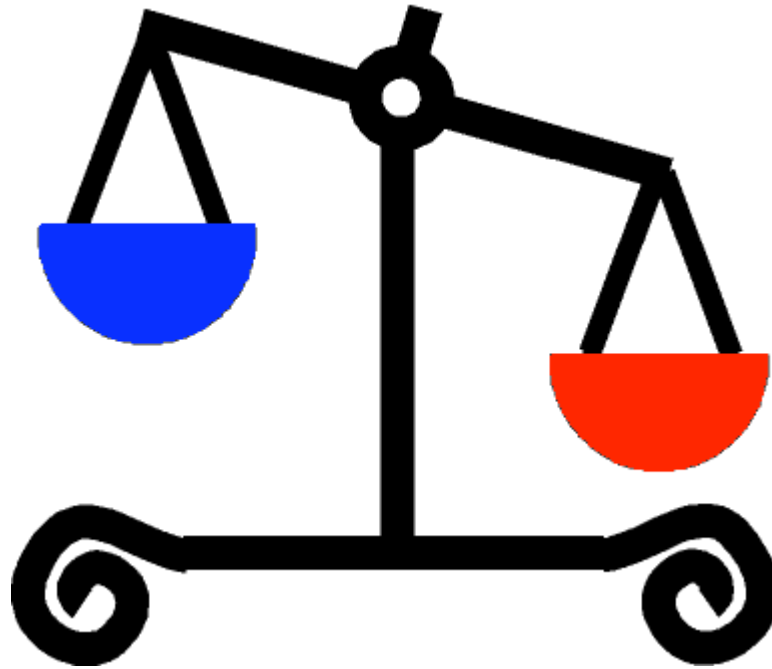


- Encourage life long learning (sustainable assessment) (as)





# The unbalanced purposes of assessment



**Assessment *for*  
and *as* learning**

**Certification & QA**

# Valid assessment

- the range and types of assessments should measure students' achievement of the knowledge, skills and understanding identified as intended learning outcomes (objectives).\*
- Is your assessment **FIT FOR PURPOSE?**

\* Adapted from UK Quality Code (2012)

# Dimensions of Knowledge

- ▶ Factual: facts a student needs to be familiar with;
- ▶ Conceptual: knowledge such as knowledge of classifications, principles, theories, models and structures;
- ▶ Procedural: knowing how to do something including (professional, vocational and academic) techniques, skills and methods of enquiry,
- ▶ Metacognitive: knowledge of self and cognitive tasks and methods of learning and organising ideas - *thinking about ones thinking in a purposeful way*

(from Anderson, 2003:29)

For a useful summary, see <http://thesecondprinciple.com/teaching-essentials/beyond-bloom-cognitive-taxonomy-revised/>

# 21<sup>st</sup> Century higher education

- Skills for the 'knowledge economy'\*
  - Critical thinking and problem-solving
  - Collaboration across networks and leading by influence
  - Agility and adaptability
  - Initiative and entrepreneurialism
  - Effective oral and written communication
  - Accessing and analysing information
  - Curiosity and imagination

\* 'Must have' skills for the future to tackle the 'Global achievement gap' (Wagner, 2008)



Do these attributes figure in program/unit outcomes and do assessment tasks foster and test these broader skills and capacities?

Discuss these two questions with your neighbours:

How valid are the current assessment methods on your courses? Do they really test achievement of the learning outcomes/ objectives?

To what extent does the program assess students' achievement in the knowledge and skills for a 21<sup>st</sup> century curriculum?





# Characteristics of learning-oriented assessment

- Formative
- Demands higher order learning
- Learning and assessment are integrated
- Students are involved in assessment
- It promotes thinking about the learning process;
- Assessment expectations should be made clear;
- Involves active engagement of students, developing independent learning;
- Tasks should be authentic and involve choice ;
- Tasks align with important learning outcomes
- Assessment should be used to evaluate teaching.

# Tests & Exams

- They do not encourage students to understand, only to identify the correct answer
- They rarely result in useful feedback,
- They struggle to assess higher level learning, procedural or metacognitive knowledge;
- They often come at the end of a course; they are not integrated into the learning;
- The assessment criteria are not clear,

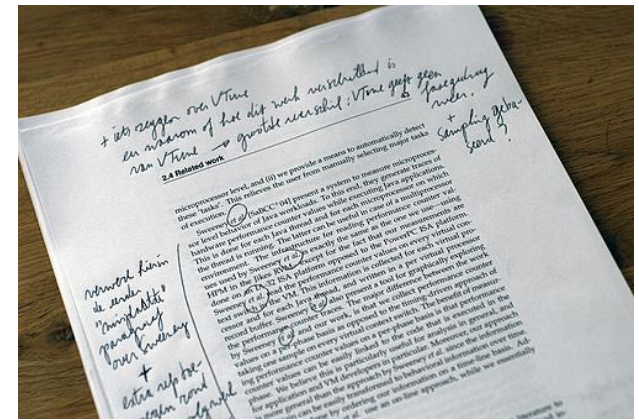


Exams: 'The silent killer of learning' – Mazur.

# Essays

have the potential to meet many characteristics but:

- Often no formative element
- Students may be able to pass adequately by regurgitating others' evaluation or criticism (from lectures or reading), they may avoid higher order learning.
- Students not involved in assessment or thinking about learning
- Rarely authentic tasks
- Criteria open to wide interpretation



# Psychology Redesign

- 560 students in groups of 6-7;
- 3 week cycle culminating in 700-800 word essay  
e.g. 'Assess the strengths and weaknesses of Freud's and Eysenck's theories of personality.  
Are the theories incompatible?
- Guidance provided for tackling the question and working in a group;
- Best definitions & essays posted on VLE as **feedback**;
- Students used familiar language to discuss academic concepts – **Dialogue and explanation.**



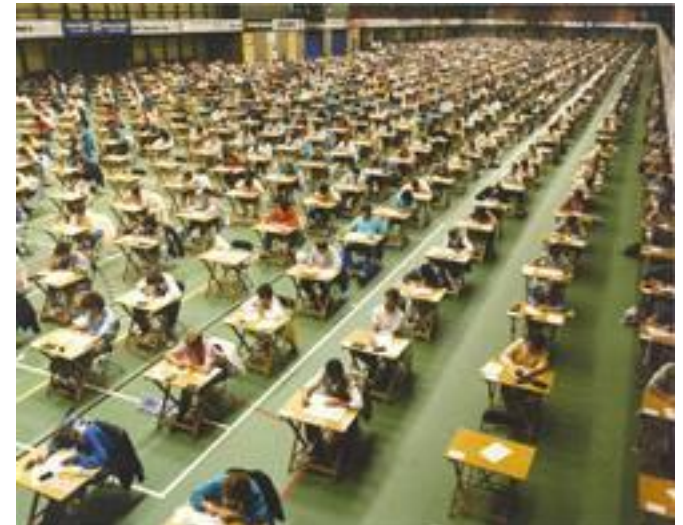
# Peer assessment in lab reports

- Formative
- Students develop understanding of quality in analysing and reporting science
- Higher order learning, focus on the science rather than a description of the process
- Students involved in assessment, developing skills of evaluation



# Interactive exam

- higher order thinking
- integration of university knowledge and work-based knowledge
- authenticity
- student involvement in assessment
- gaining feedback (from expert solutions) and taking action on it.
- Involves reflection
- Exam marking scheme shared with students before the exam



# Some other assessment methods

- Writing tasks: newspaper articles, press releases, executive summaries, information sheets (authentic tasks).
- Video about a specific topic – Youtube? (developing new skills)
- Research Grant applications (lots of learning, less marking)
- Lay commentary on specialist material, e.g. journal article (being able to explain things to non specialists – demonstrate understanding)
- Poster – (presenting information clearly & concisely)
- Presentation or oral assessment – ‘explanation’ as learning
- Real problems and case study analysis (problem solving)
- Reflective Journals, Diaries & learning logs (thinking about learning)
- Wikipedia entry (explaining accurately to non-specialists)

*Tasks in red very suitable for group assignments*



# Discussion

- Talk about these assessment ideas with your neighbours.
- Do you have examples of 'learning-oriented' assessment in your own programs which you can share?





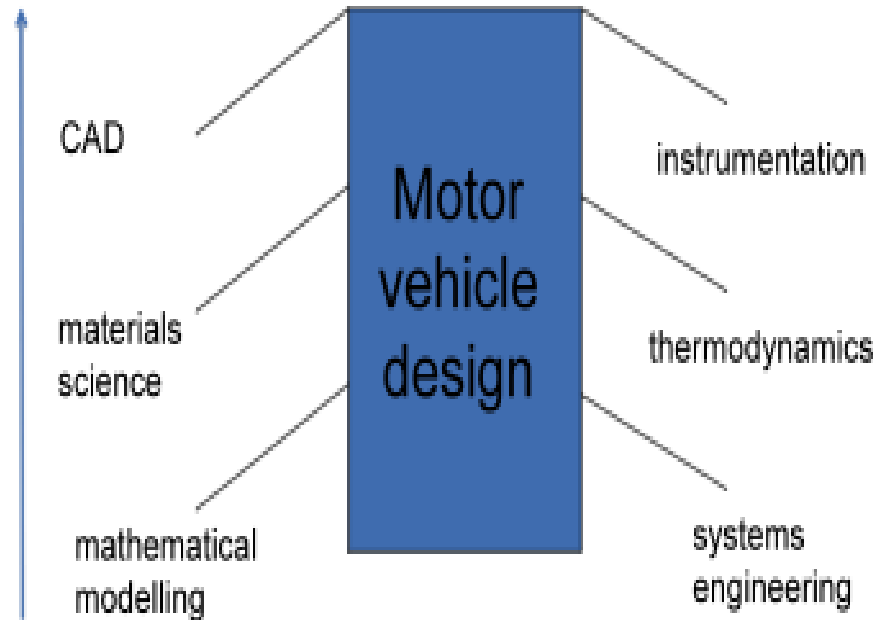
# Major problems in 'program' assessment

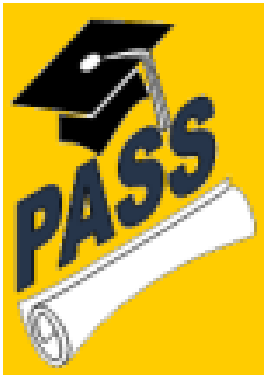
1. Not assessing program outcomes.
2. Courses too short for complex learning - atomisation of assessment
3. Students and staff failing to see the links between courses on their program.
4. Over-standardisation in assessment regulations.
5. Too much summative – not enough formative.



# program assessment ideas

- Accumulative projects.
- Capstone course, eg fashion show.
- Portfolio/E-portfolio





# program assessment:

## Coventry Business Management

- Each year will have a unifying theme, focussing on a different sector exemplified by a local employer with a global reach or brand – 1st Year Kraft, 2nd Year Jaguar, 3rd Year Barclays.
- Second semester of each year, 50% assessment will be through a large integrative task, which will be designed to assess learning from all three courses.
- 50% of each course will be independently assessed, but other 50% will come from the assessment of the integrated task against different criteria appropriate to each course's different learning outcomes.

# Programmatic assessment:

## Graduate entry program Maastricht - medicine

- Stopped thinking in terms of individual assessment methods to test student achievement in specific domains.
  - Replaced by a systematic and programmatic approach, longitudinally oriented recognising that passing a test once does not guarantee competence.
- Many methods of assessment are used
  - old and new; standardized and unstandardized, experts, peers, self, tests, OCSEs, in practice, etc)
  - Focus is on program outcomes in terms of achieving competencies
  - Assessment structured by an **e-portfolio** where all assessment data is held – **information rich** system
- Professional judgment is imperative (similar to any professional practice).
  - Subjectivity is dealt with through sampling and procedural bias reduction methods (not with standardization or objectification)
- Decision-making by committee based on portfolio information
  - Assessment becomes personalised –
  - remediation of learning may be prescribed

# A program-based assessment strategy

- Focus on the **program outcomes/ objectives**;
- **balance** the different purposes of assessment in the assessment plan – assessment **OF, FOR** and **AS** learning.
- Plan assessment to encourage students and staff to think about **overall learning**, not just ticking off each individual course objective once completed.

# Conclusion



Diversifying assessment can help:

- Balance the different purposes of assessment;
- Make assessment more valid for a 21<sup>st</sup> century curriculum;
- Encourage and reward student engagement;
- Ensure that students' study efforts are directed towards meaningful, program level, learning;
- Prepare students for independent and lifelong learning;

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