

Principles of assessment in health professions education and its adaptation during Covid19 pandemic

Webinar title: Assessment adaptation in health professions education during Covid19 pandemic

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Cees van der Vleuten, Maastricht University,
The Netherlands
www.ceesvandervleuten.com

Conventional approach to education

- Curricula based on information transmission
- Teacher centred
- Very focused on knowledge
- Summative modular assessment
- Big bang standardized examinations
- Grade-driven

Method reliability as a function of testing time

Testing Time in Hours	MCQ	Case-Based Short Essay	Problem solving Test (PMP)	Oral Exam	Long Case	OSCE	Mini-CEX	Practice Video Assessment	In-cognito SPs
1	0.62	0.68	0.36	0.50	0.60	0.54	0.73	0.62	0.61
2	0.77	0.81	0.53	0.67	0.75	0.70	0.84	0.77	0.76
4	0.87	0.89	0.69	0.80	0.86	0.82	0.92	0.87	0.86
8	0.93	0.94	0.82	0.89	0.92	0.90	0.96	0.93	0.93

Source: Van der Vleuten, C. P., & Schuwirth, L. W. (2005). Assessing professional competence: from methods to programmes. *Medical Education*, 39(3), 309-317.

Educational impact: How does assessment drive learning?

- Relationship is complex (cf. Cilliers, 2011, 2012)
- But impact is often very negative
 - Poor learning styles
 - Grade culture (grade hunting, competitiveness)
 - Grade inflation (e.g. in the workplace)
- A lot of REDUCTIONISM!
 - Little feedback (grade is poorest form of feedback one can get)
 - Non-alignment with curricular goals
 - Non-meaningful aggregation of assessment information
 - Few longitudinal elements
 - Tick-box exercises (OSCEs, logbooks, work-based assessment).

WHO ARE WE?



STUDENTS!



WHAT DO WE DO?



**WE STUDY FOR
THE TESTS!**



AND THEN?



THEN WE FORGET!

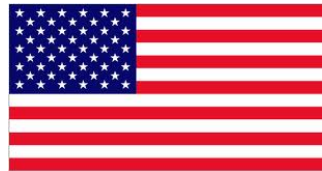


Competency-frameworks



CanMeds

- Medical expert
- Communicator
- Collaborator
- Manager
- Health advocate
- Scholar
- Professional



ACGME

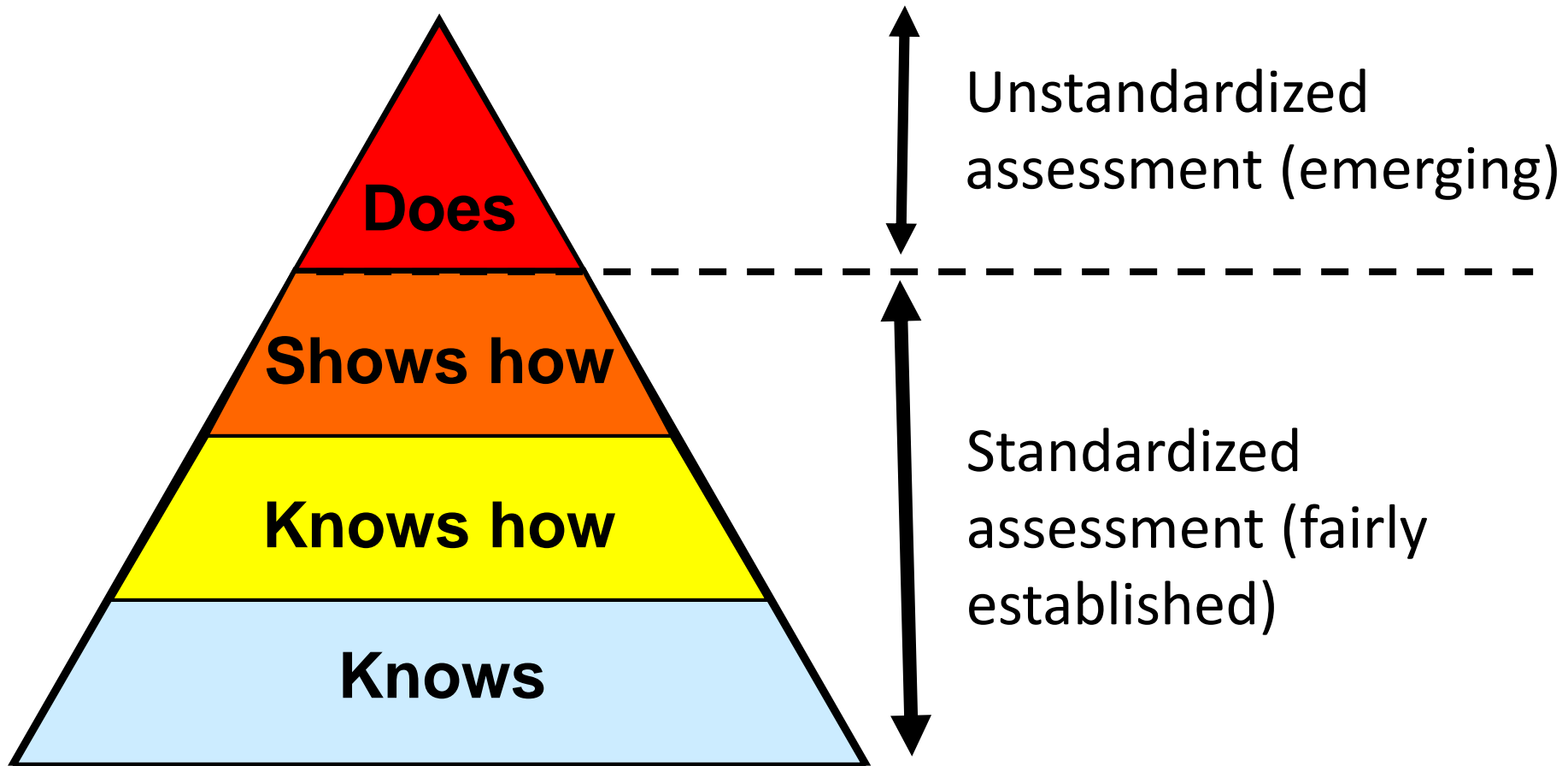
- Medical knowledge
- Patient care
- Practice-based learning & improvement
- Interpersonal and communication skills
- Professionalism
- Systems-based practice



GMC

- Good clinical care
- Relationships with patients and families
- Working with colleagues
- Managing the workplace
- Social responsibility and accountability
- Professionalism

Validity: what are we assessing?

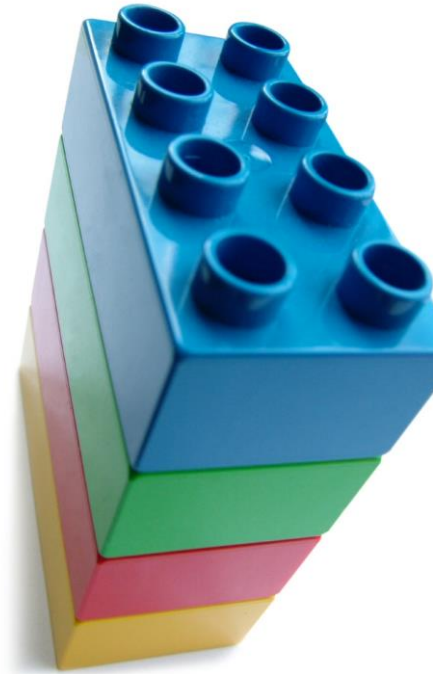


Implications for assessment

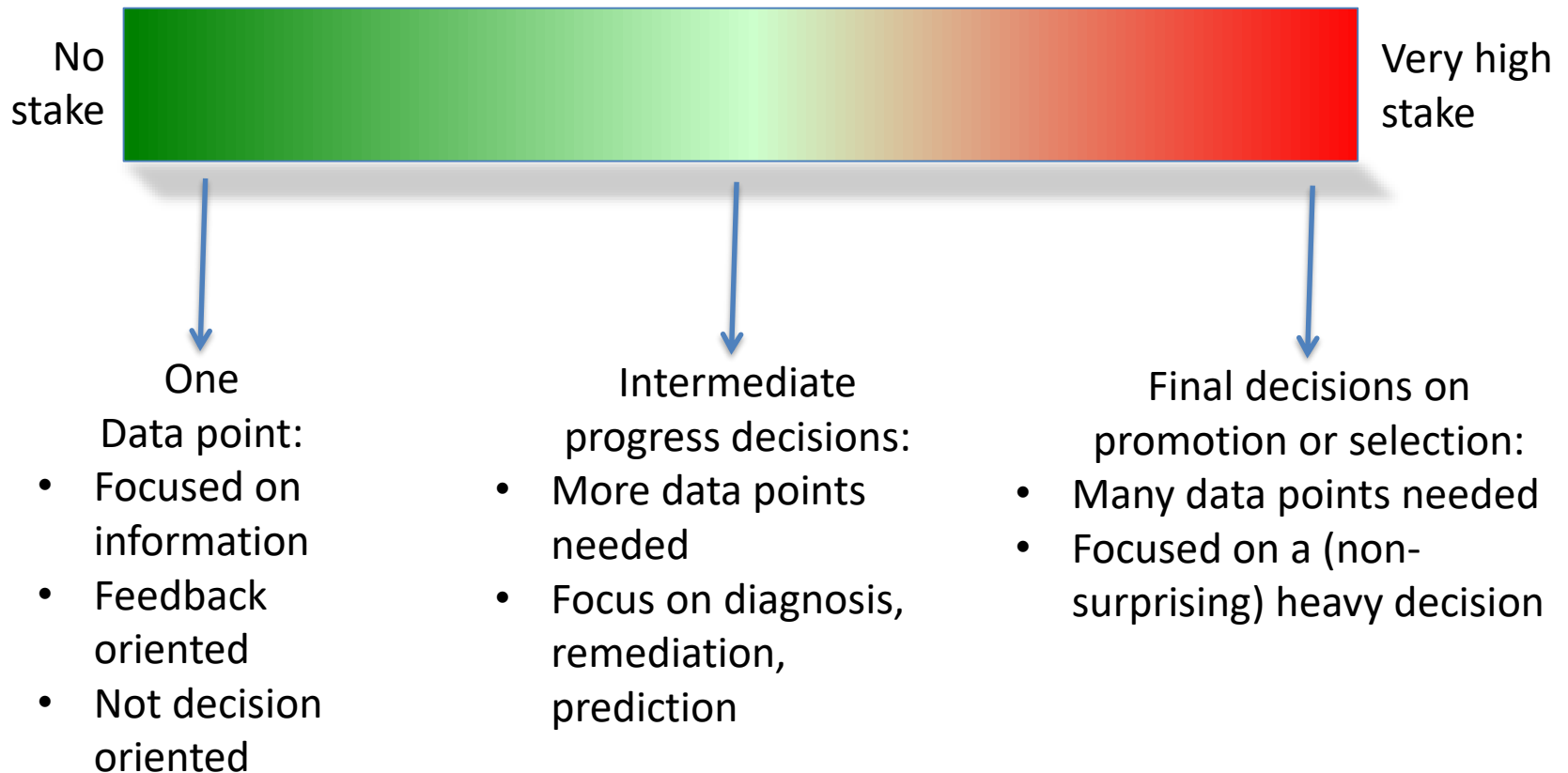
- Assessment should drive deep learning
- Assessment should be feedback oriented, not only quantitative but also qualitative (narrative)
- Assessment should be a frequent, ongoing, continuous activity, looking at development or growth of competence

Building blocks for programmatic assessment

- Every assessment is but one data point (Δ)
- Every data point is optimized for learning
 - Information rich (quantitative, qualitative)
 - Meaningful
 - Variation in format
- Summative versus formative is replaced by continuum of stakes (stakes)
- N data points are proportionally related to the stakes of the decision to be taken.



Continuum of stakes, number of data point and their function

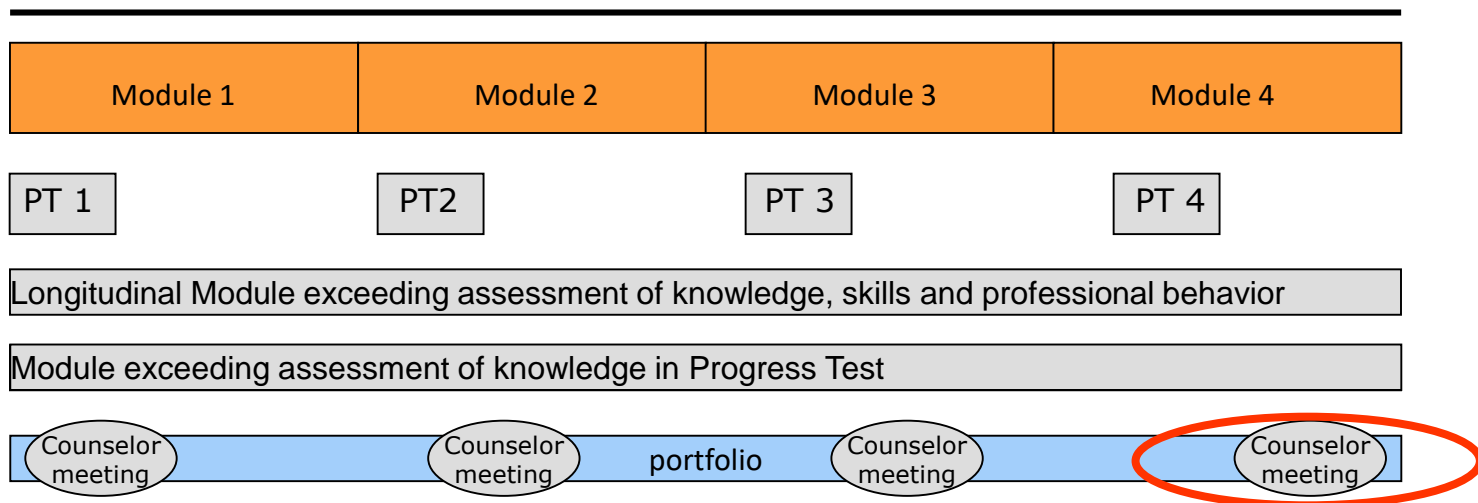


Assessment information as pixels



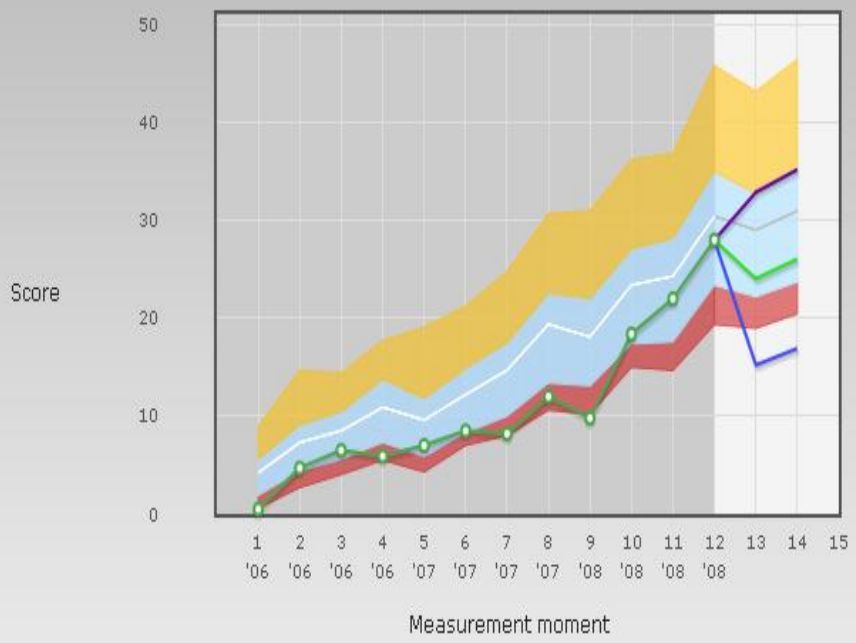
The assessment program

- Assessment in Modules: assignments, presentations, end-examination, etc.
- Longitudinal assessment: assignments, reviews, projects, progress tests, evaluation of professional behavior, etc.
- All assessment is informative and low stake formative
- The portfolio is central instrument



- Domain
- Total
- Result
- Score
- Series
- Unprocessed
- Peer group
- UM FHML-G year group 3
- Reference values
- Percentiles

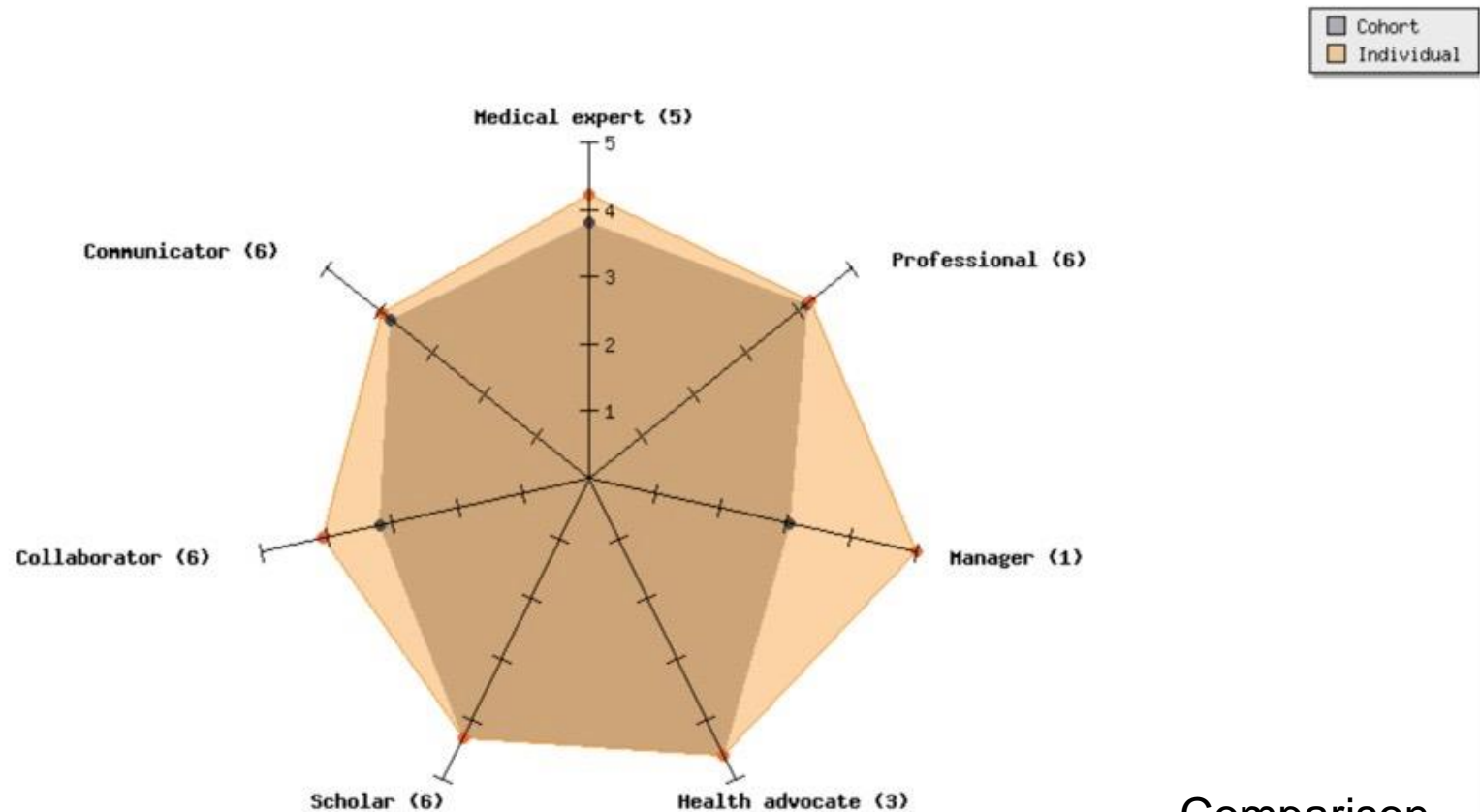
Longitudinal series (unprocessed) of score for total for student 403164 with peer group UM FHML-G year group 3 as background population



- Student score
- Lower confidence bound prognosis
- Prognosis
- Upper confidence bound prognosis

Longitudinal total test scores across 12 measurement moments and predicted future performance

Electronic portfolio (ePass)

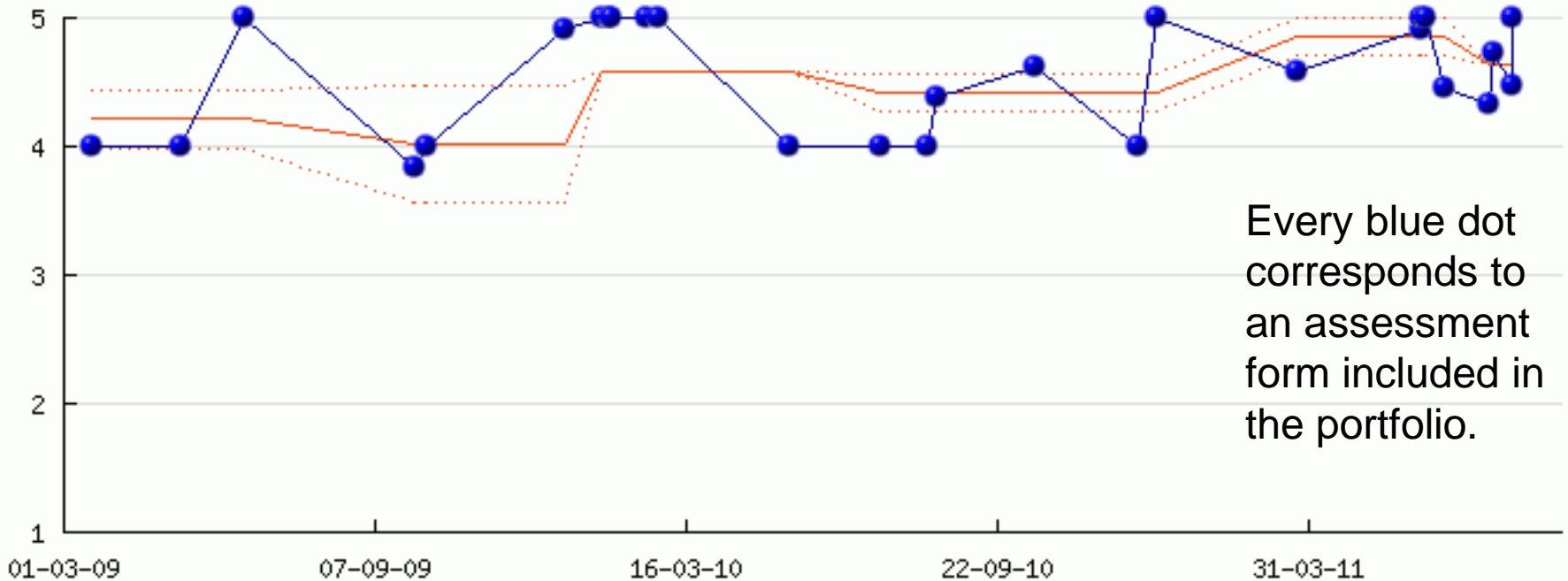


Comparison between the score of the student and the average score of his/her peers.

Electronic portfolio (ePass)

1: Medical expert

Table view



Electronic portfolio (ePass)

Narrative feedback

Feedbacktype: Competency:

Date	Feedbacktype	Competency	Narrative feedback	Form
06-11-2013	Improvement	General	don't repeat too much, no irrelevant details Conclusion: antenatal care in pregnancy may be done by a midwife and delivery will be done by a gynecologist, I revise	Mini-CEX-N
06-11-2013	Strength	General	included all information.	Mini-CEX-N
06-11-2013	Improvement	General	don't repeat too much, no irrelevant details. Conclusion: antenatal care in pregnancy may be done by a midwife, delivery will be done by a gynecologist, I revise.	Mini-CEX-N
06-11-2013	Strength	General	included all info.	Mini-CEX-N
18-10-2013	Improvement	General	more communication with the patient, in this case difficult because of language barrier more communication with supervisor	OSATS

Coaching by counselors

- Coaching is essential for successful use of reflective learning skills
- Counselor gives advice/comments (whether asked or not)
- He/she counsels if choices have to be made
- He/she guards and discusses study progress and development of competencies



"'LUNCH'? WELL, YES--BUT WHAT ARE YOUR LONG-TERM GOALS?"

Decision-making by committee

- Committee of counselors and externals
- Decision is based on portfolio information & counselor recommendation, competency standards
- Deliberation is proportional to clarity of information
- Decisions are justified when needed; remediation recommendation may be provided



The learner

Sylvia F
Erik W

Trans: a Pr

Karen E
and Ch

Innovation

Advances in Medical Education and Practice

Open Access Full Text Article

Deconstructing programmatic assessment

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Prof

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Tim J Wilkinson¹
Michael J Tweed²

¹Education Unit, University of Otago, Christchurch, New Zealand;
²Education Unit, University of Otago, Wellington, New Zealand

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Abstract: We describe programmatic assessment and the problems it might solve in relation to assessment and learning, identify some models implemented internationally, and then outline what we believe are programmatic assessment's key components and what these components might achieve. We then outline some issues around implementation, which include blueprinting, data collection, decision making, staff support, and evaluation. Rather than adopting an all-or-nothing approach, we suggest that elements of programmatic assessment can be gradually introduced into traditional assessment systems.

Keywords: assessment, implementation, medicine, decision making

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PERSPECTIVES

MEDICAL

MEDICAL
TEACHER

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Feature	Traditional summative assessment approach	Programmatic assessment approach
Education philosophy	Behaviouristic	Constructivist
Use of single data points	Pass/fail decision oriented	Feedback oriented
Performance information	Grades	Profile scores, narrative information, information rich data
Performance orientation	Modular	Longitudinal, developmental
Remediation	Resits	Personalized ongoing remediation activities
Use of methods	Restricted to reliable methods	Eclectic, depending on the educational justification
Aggregation of information	Across skills/content areas within methods	Across methods to skills/content areas
Learner support	Unstructured	Mentoring
Progress decisions	Algorithmic	Professional judgment (in committees)

More Corona proof?

- Less reliance on big (external) exams
- Continuous data gathering ensures data integrity