The assessment of Profesional Competence

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Cees van der Vleuten

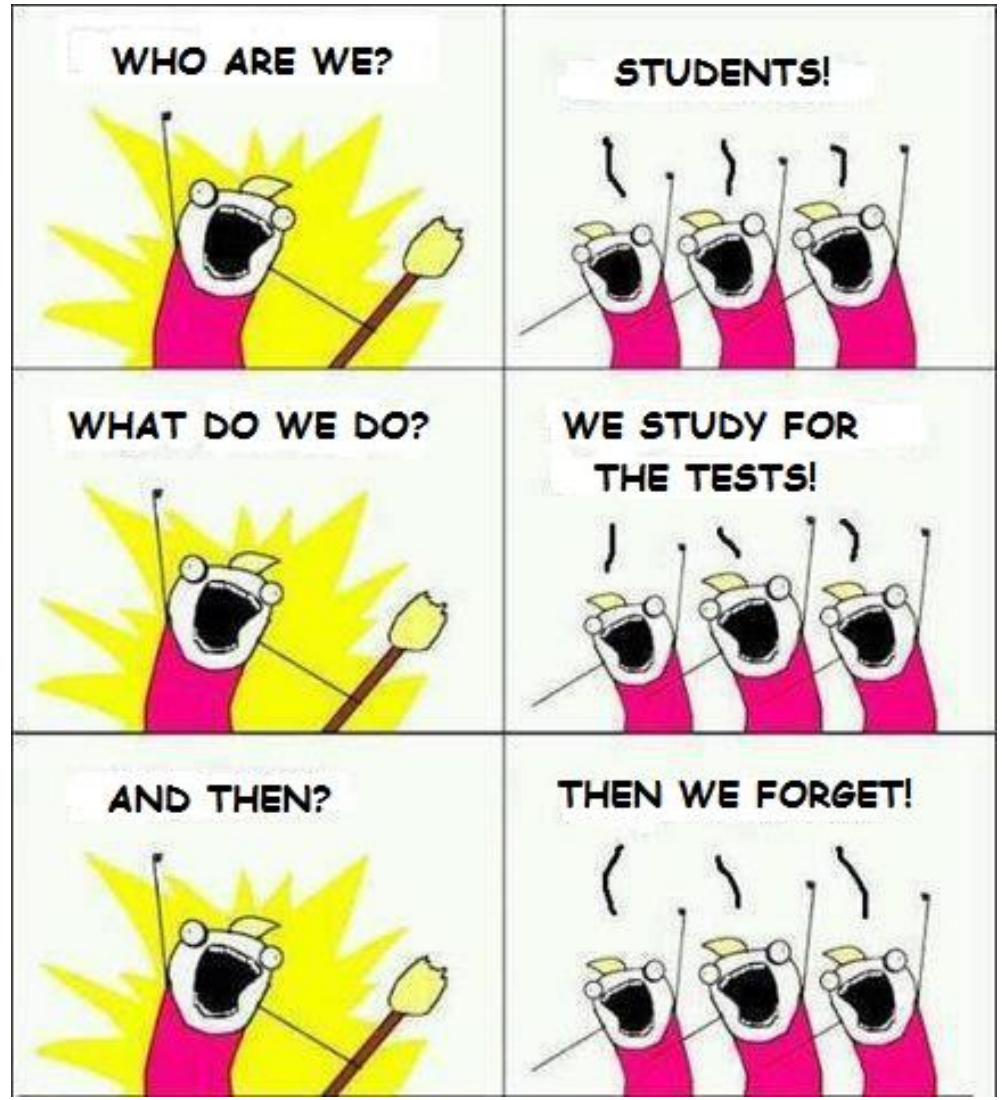
Maastricht University, The Netherlands

www.ceesvandervleuten.com

Method reliability as a function of testing time

Testing Time in Hours	MCQ[1]	Case-Based Short Essay[2]	PMP[1]	Oral Exam[3]	Long Case[4]	OSCE[5]	Mini CEX[6]	Practice Video Assess-ment[7]	In-cognito SPs[8]
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

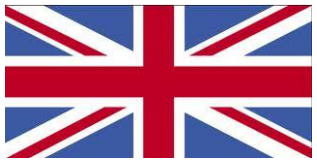
[1]Norcini et al., 1985
[2]Stalenhoef-Halling et al., 1990
[3]Swanson, 1987
[4]Wass et al., 2001
[5]Van der Vleuten, 1988
[6]Norcini et al., 1999
[7]Ram et al., 1999
[8]Gorter, 2002


WHO ARE WE?
STUDENTS!
WHAT DO WE DO?
WE STUDY FOR THE TESTS!
AND THEN?
THEN WE FORGET!

Assessment driving learning …….often bad news again!

- Impact on learning is often very negative (Cilliers et al, 2011; 2012; Al-Kadri et al, 2012)
  - 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; Shute 2008)
  - Non-alignment with curricular goals
  - Non-meaningful aggregation of assessment information
  - Few longitudinal elements
  - Tick-box exercises (OSCEs, logbooks, work-based assessment).

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

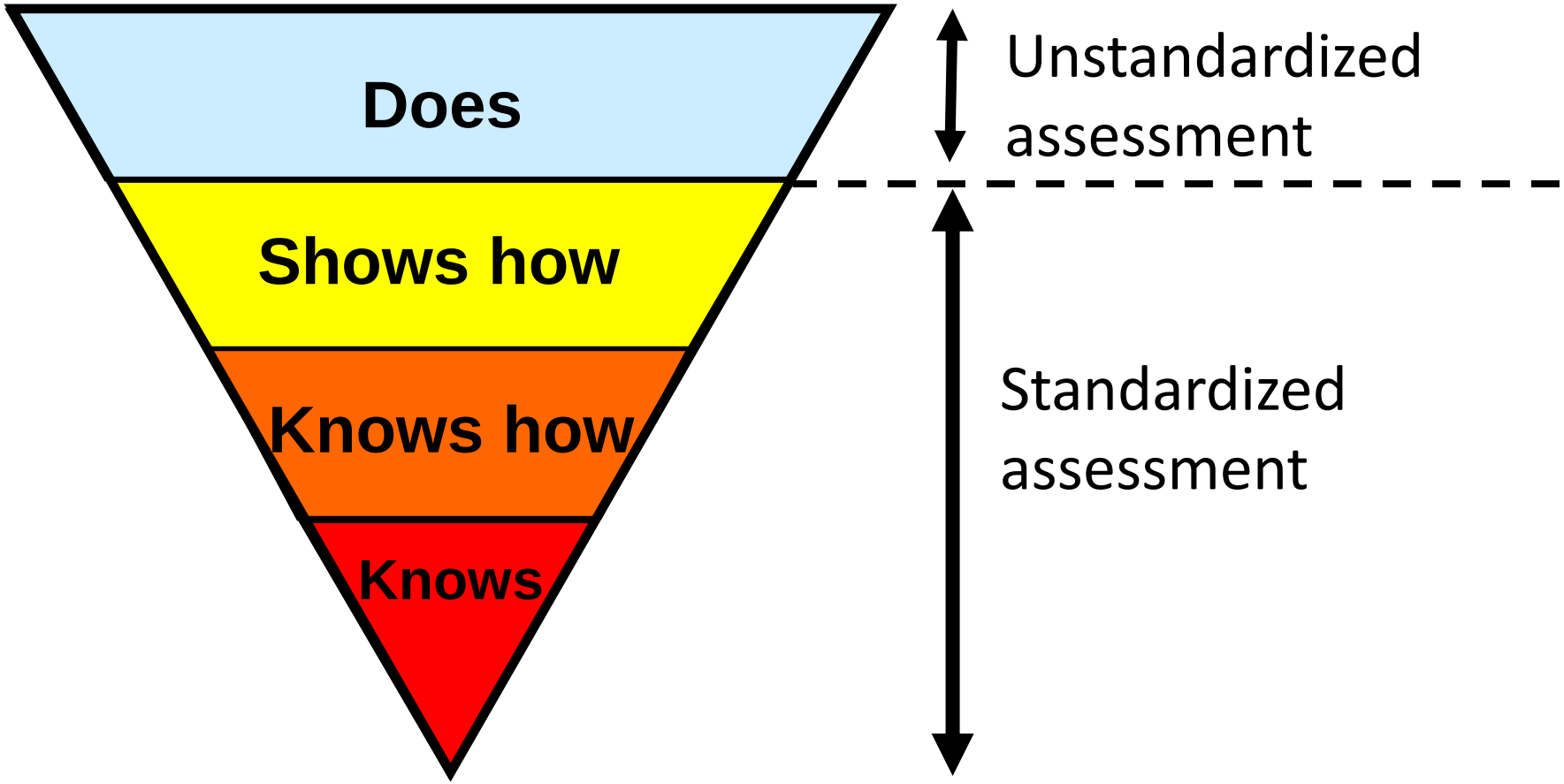
GMC

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

Implications for assessment

- We need to assess behaviours in real-life settings

Assessing complex behavioural skills



Implications for assessment

- More assessment of behaviours in real-life settings
- More professional judgment
- More feedback
- More feedback in words
- More reflection as a basis for life-long learning
- More longitudinal monitoring
- More assessment *for* learning.

feedback has been unclear. This study demonstrates the benefits of moving away from a behaviouristic approach to assessment, based on punishment and rewards. It reveals the potential benefits of applying three constructivist principles to assessment: authenticity, empowering students with a more active role and gradual descaffolding to enable transformation towards a learning orientation.

Implications for assessment

- More assessment of behaviours in real-life settings
- More professional judgment
- More feedback
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- More reflection as a basis for life-long learning
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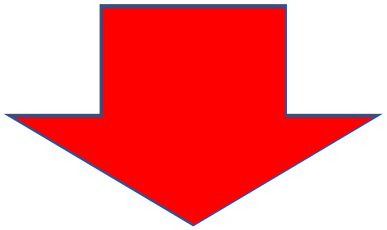
New pathway suggestions

- Stop optimizing everything in a single assessment
- Focus on feedback, reflection and mentoring
- Make high stake decisions only when you have sufficient data.

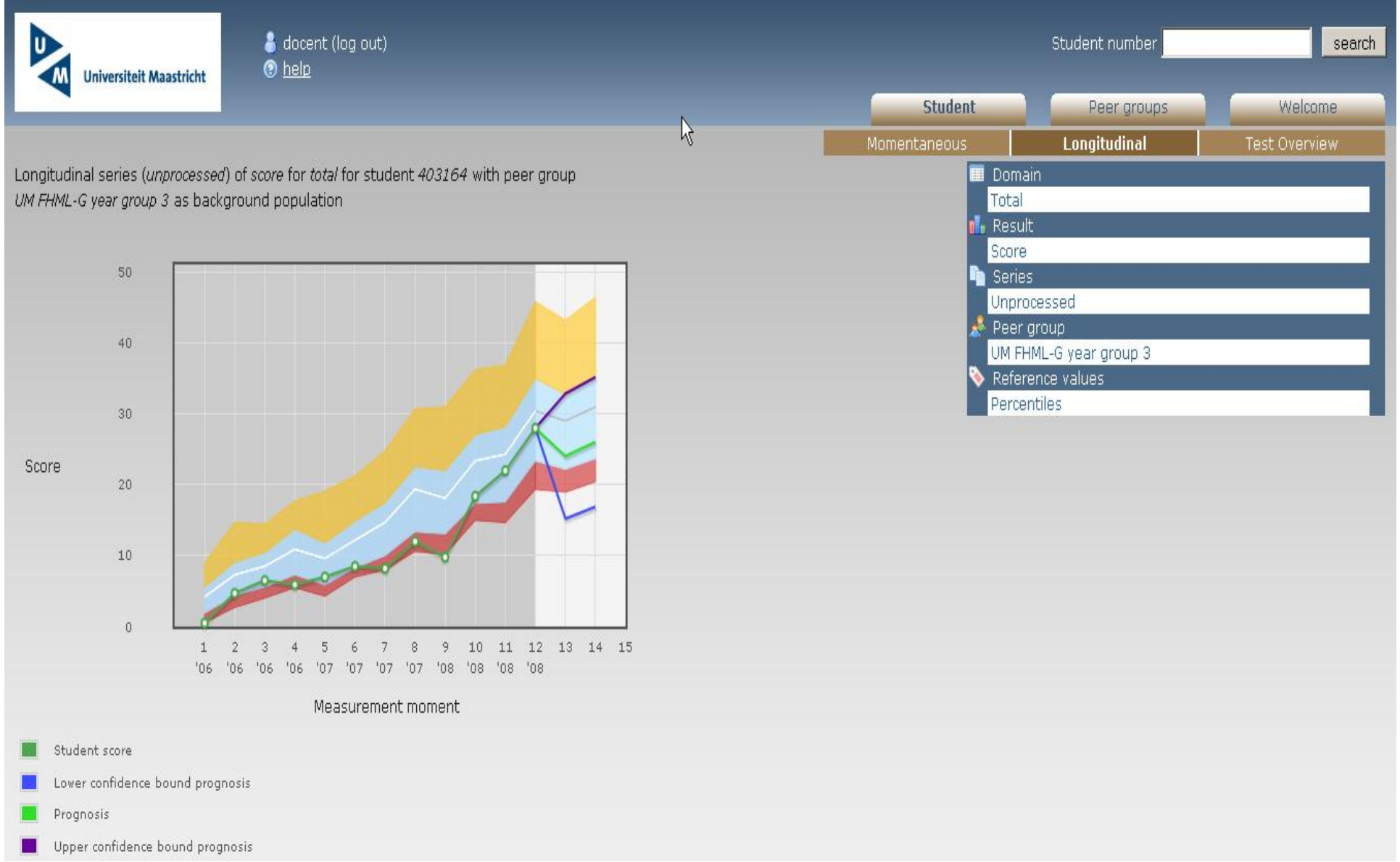


Programmatic assessment

Ground rules in programmatic assessment

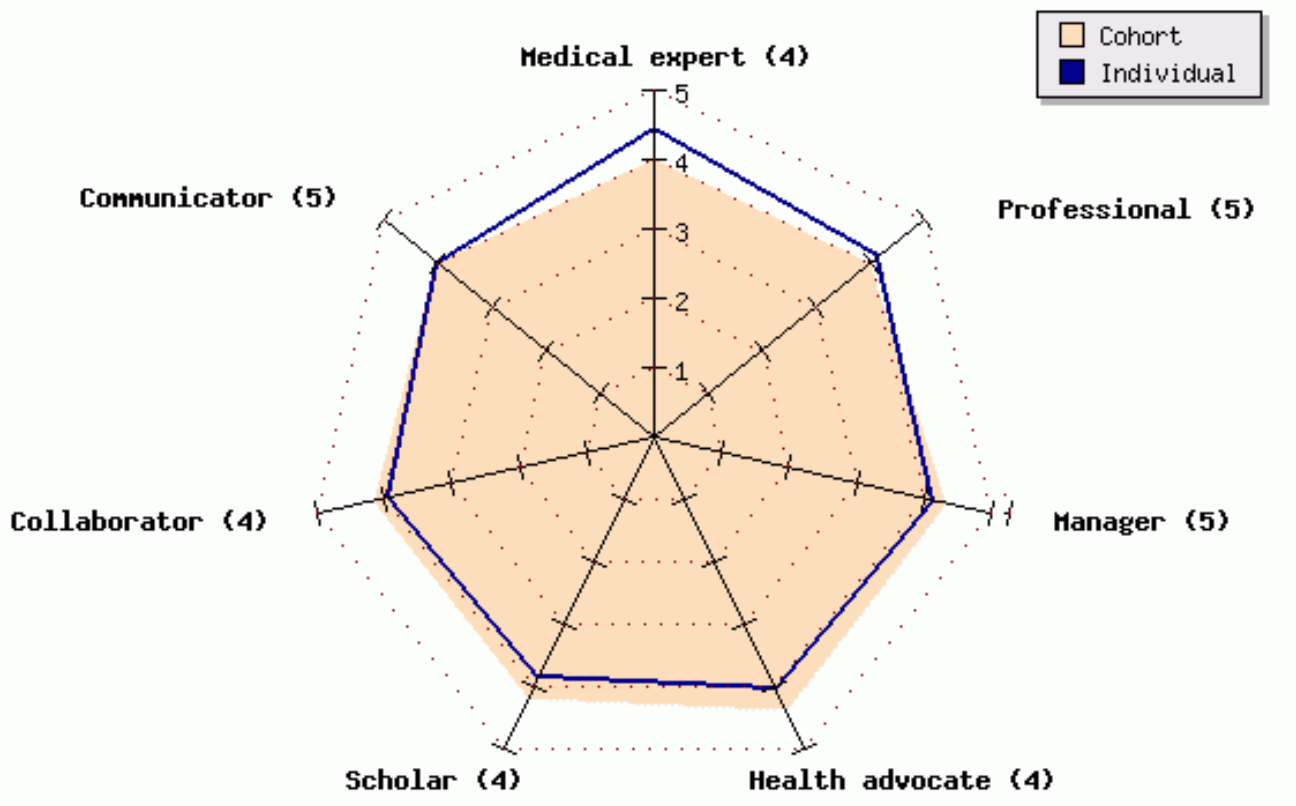
- No pass/fail decision on a single data point (single assessment), but feedback
- There is mix of methods of assessment
- The number of data points is proportionally related to the stakes of a decision
- To promote feedback use and self-directed learning learners are coached/mentored
- High stake decisions are based on professional judgment of a group of experts or committee.

Assessment information as pixels



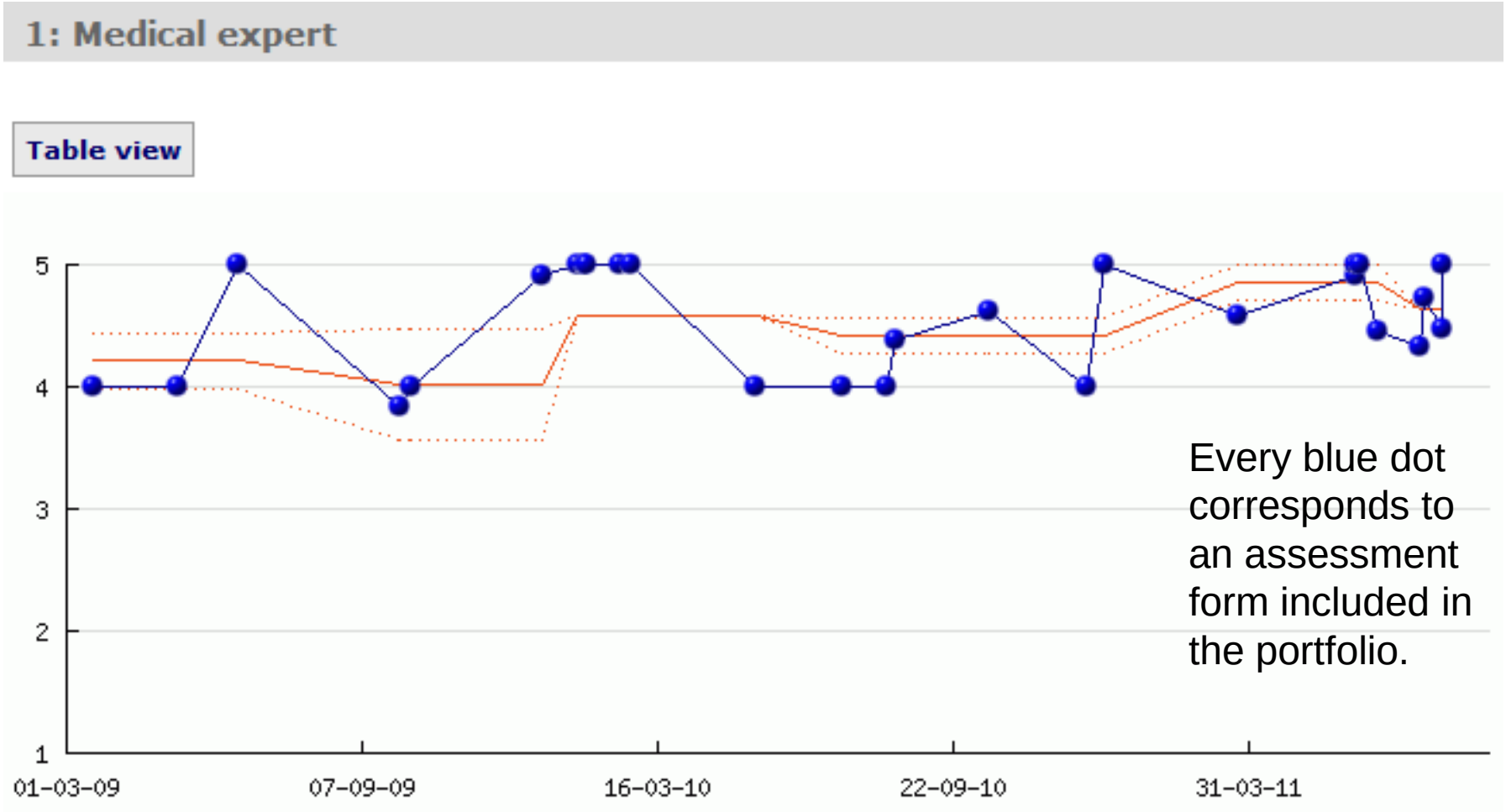
Longitudinal total test scores across 12 measurement moments and predicted future performance

Maastricht Electronic portfolio (ePass)



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

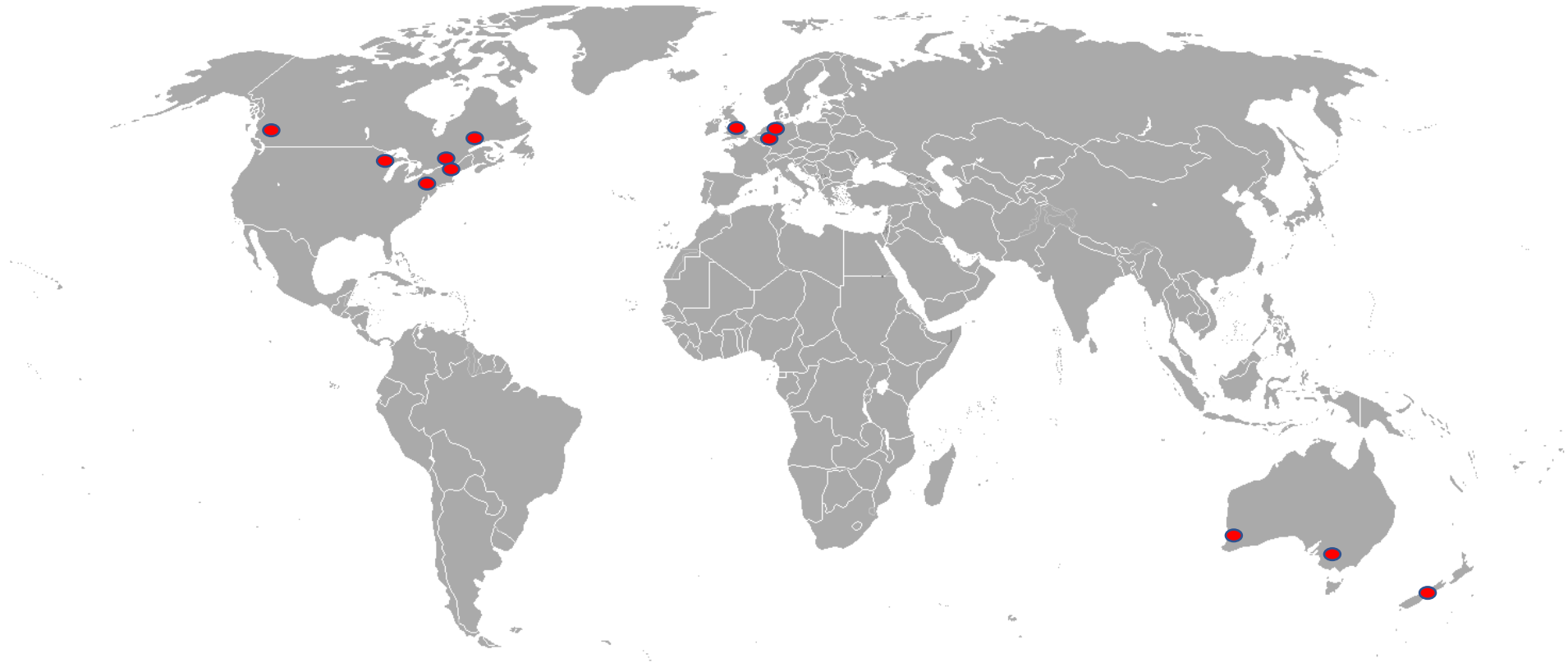
Maastricht Electronic portfolio (ePass)

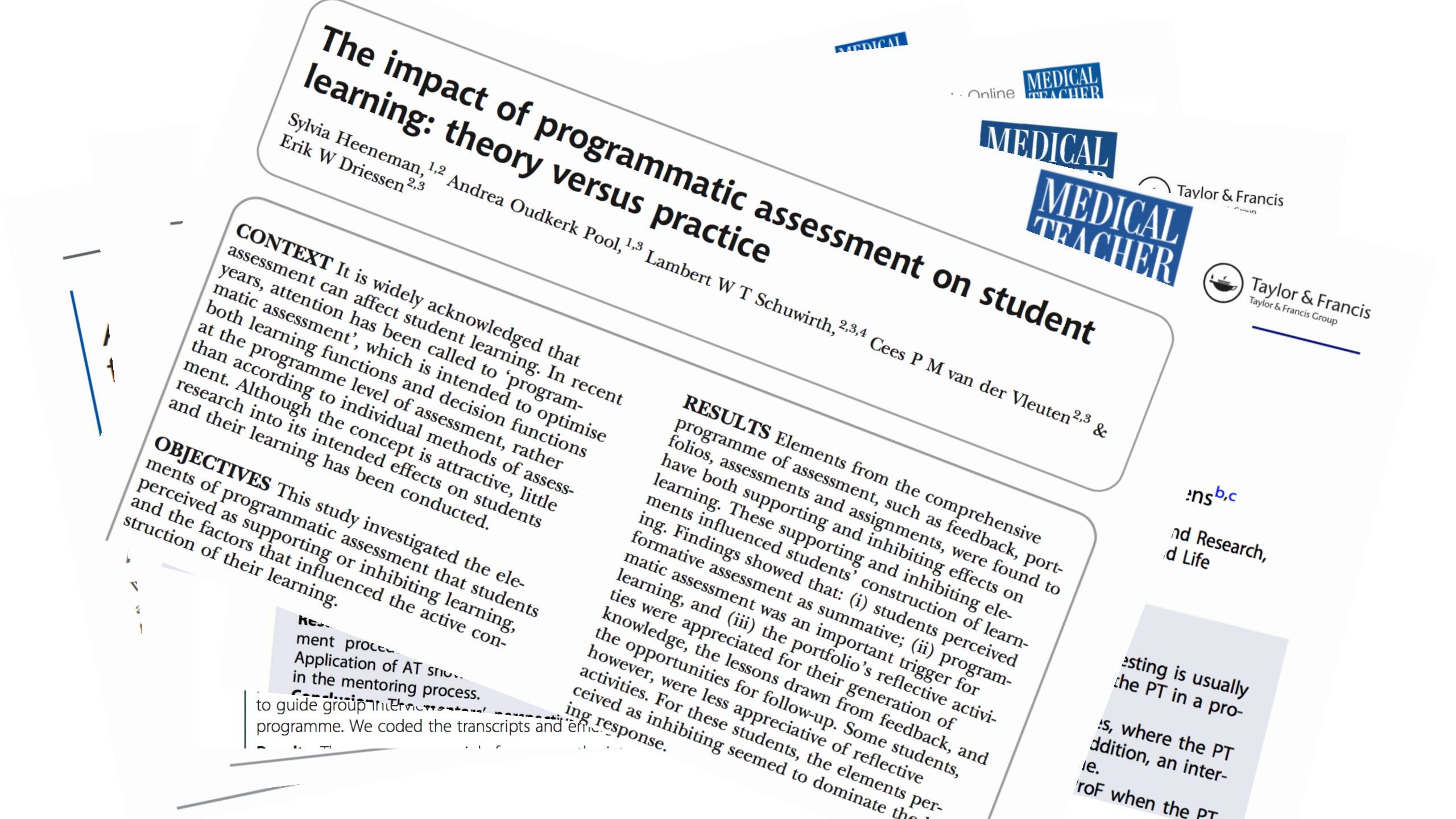


Narrative feedback

Feedbacktype: all Competency: all

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





The impact of programmatic assessment on student learning: theory versus practice

Sylvia Heeneman,[1,2] Andrea Oudkerk Pool,[1,3] Lambert W T Schuwirth,[2,3,4] Cees P M van der Vleuten[2,3] & Erik W Driessen[2,3]

CONTEXT It is widely acknowledged that assessment can affect student learning. In recent years, attention has been called to 'programmatic assessment', which is intended to optimise both learning functions and decision functions at the programme level of assessment, rather than according to individual methods of assessment. Although the concept is attractive, little research into its intended effects on students and their learning has been conducted.

OBJECTIVES This study investigated the elements of programmatic assessment that students perceived as supporting or inhibiting learning, and the factors that influenced the active construction of their learning.

RESULTS Elements from the comprehensive programme of assessment, such as feedback, portfolios, assessments and assignments, were found to have both supporting and inhibiting effects on learning. These supporting and inhibiting elements influenced students' construction of learning. Findings showed that: (i) students perceived formative assessment as summative; (ii) programmatic assessment was an important trigger for learning, and (iii) the portfolio's reflective activities were appreciated for their generation of knowledge, the lessons drawn from feedback, and the opportunities for follow-up. Some students, however, were less appreciative of reflective activities. For these students, the elements perceived as inhibiting seemed to dominate the

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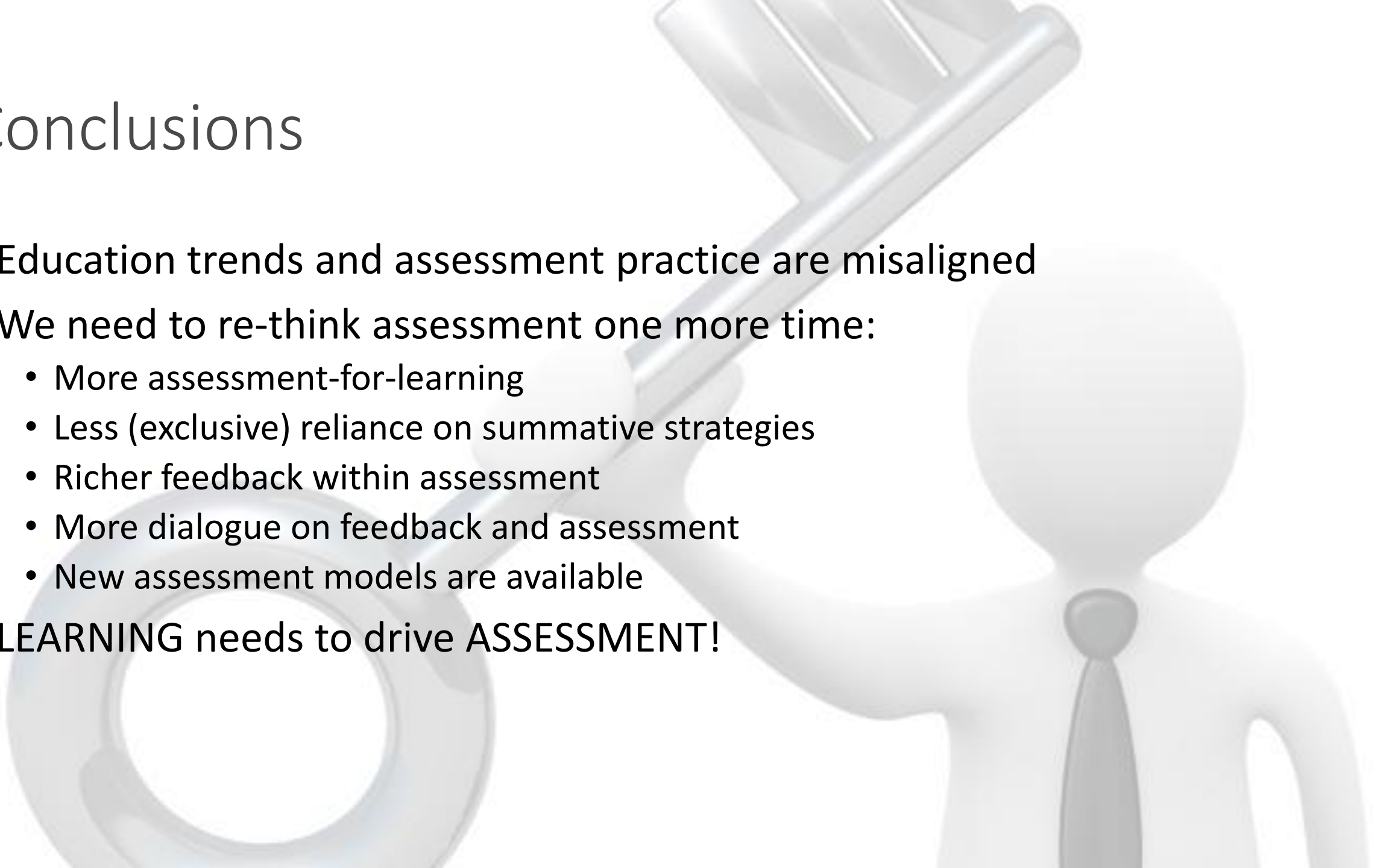
Findings on programmatic assessment so far

- The quality of the implementation defines the success (Harrison et al., 2018)
- Getting high quality feedback is a challenge (Bok et al., 2013)
- Leaners may perceive low stake assessments as high stake, all depending on the learning culture created (Schut et al., 2018)
- Coaching and mentoring is key to the success (Heeneman & Grave, 2017)
- High stake decision-making in competence committees work really well (Oudkerk-Pool et al., 2017, De Jong et al, in preparation).

Conclusions

- Education trends and assessment practice are misaligned
- We need to re-think assessment one more time:
  - More assessment-for-learning
  - Less (exclusive) reliance on summative strategies
  - Richer feedback within assessment
  - More dialogue on feedback and assessment
  - New assessment models are available
- LEARNING needs to drive ASSESSMENT!



Literature

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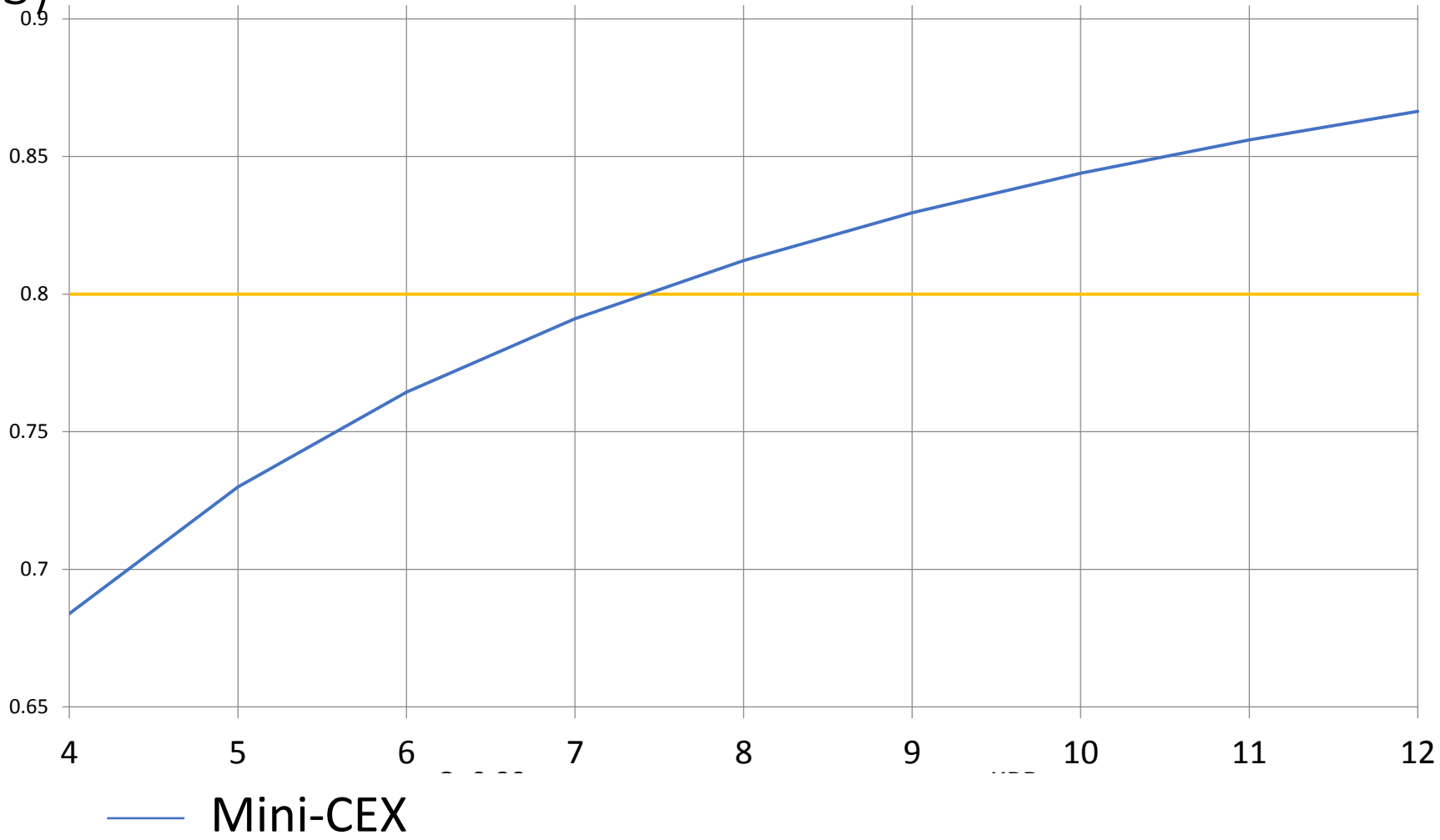
Reliability as a function of sample size (Moonen et al., 2013)



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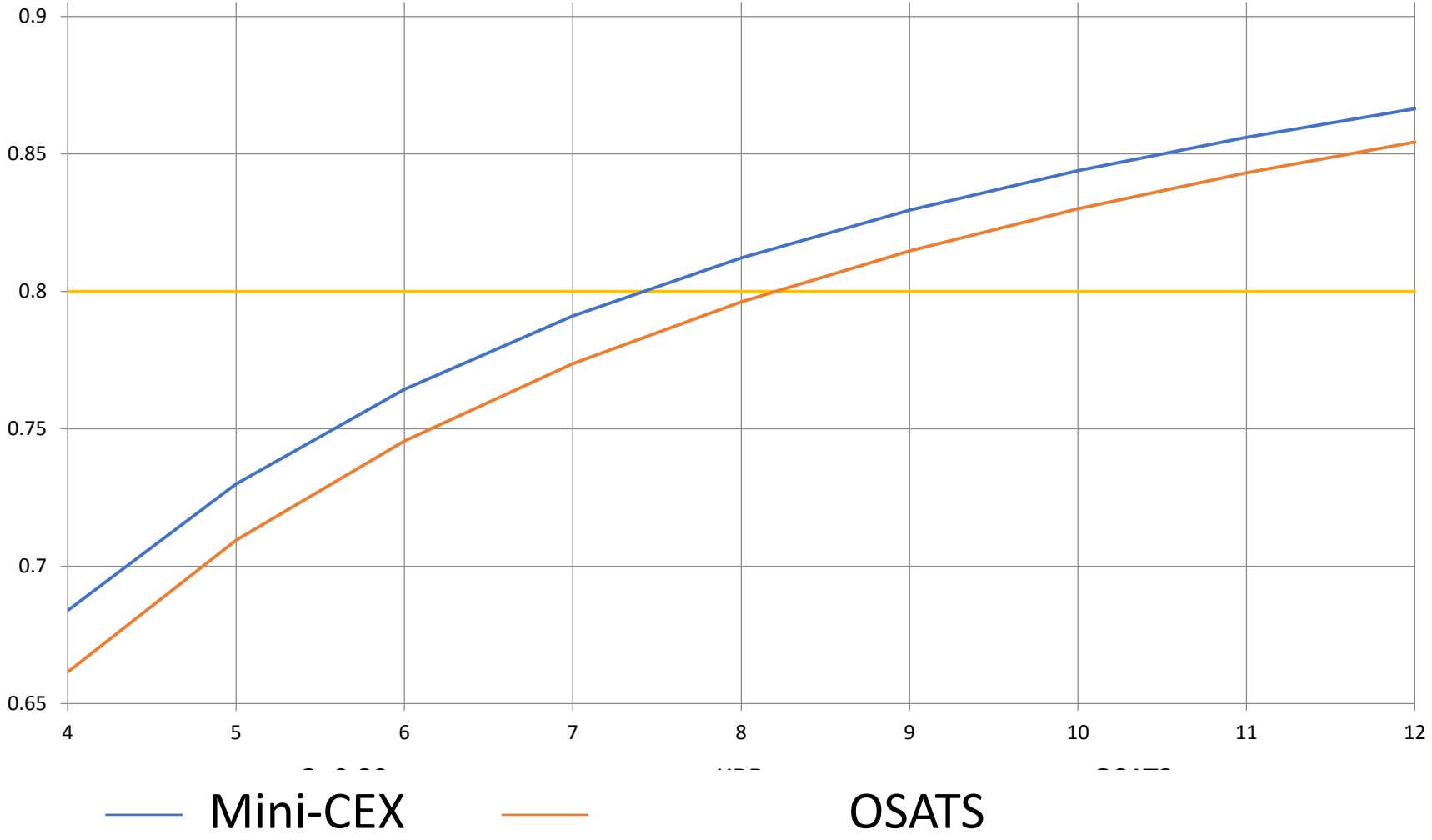

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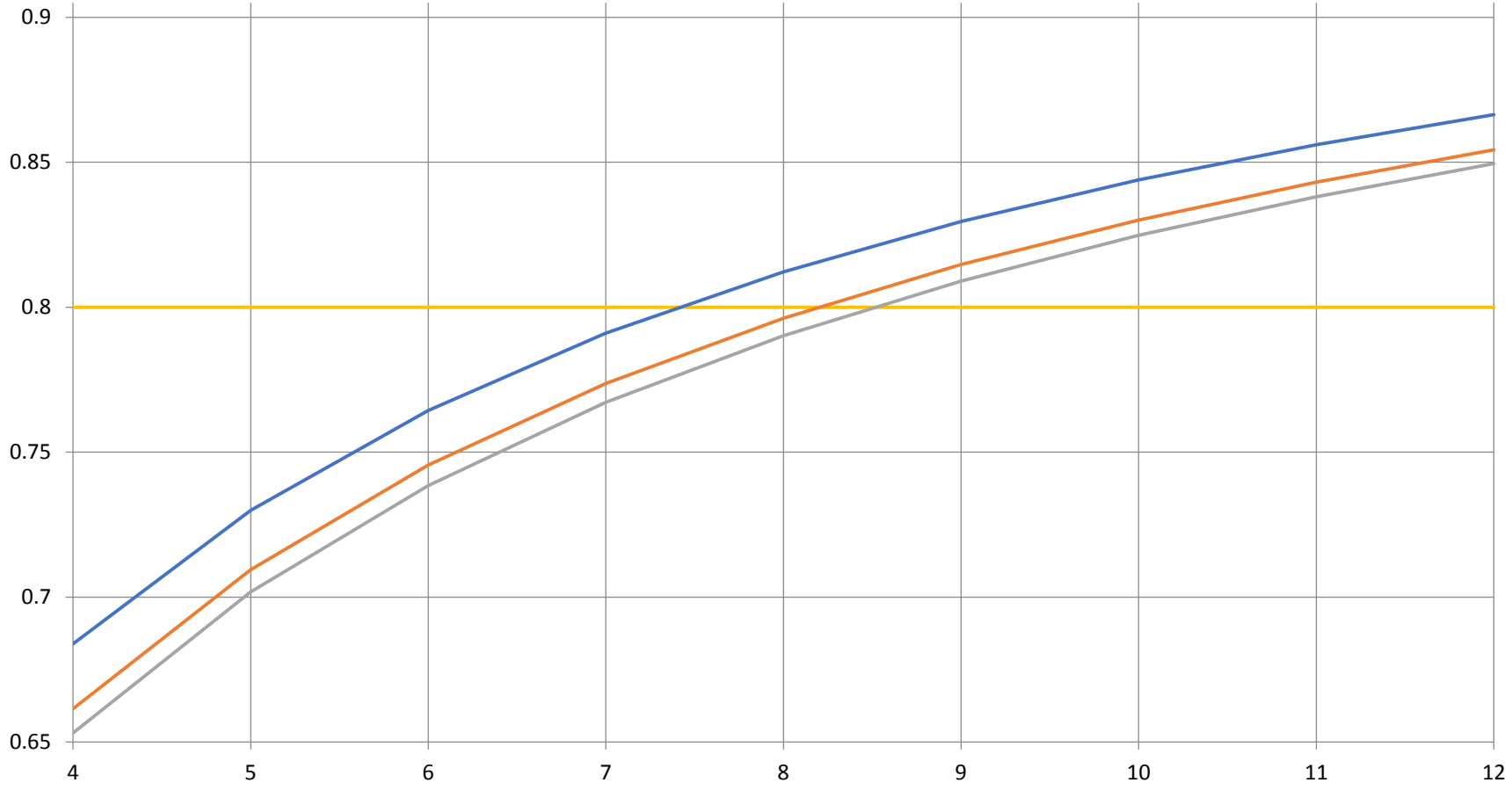

Effect of aggregation across methods
(Moonen et al., 2013)

Method	Sample needed when used as stand-alone	Sample needed when used as a composite
Mini-CEX	8	5
OSATS	9	6
MSF	9	2

Objectives

- To remind us where is education going
- To evaluate if this aligns with assessment educational practice
- To sketch future avenues

Where is education going?

- From time-based programs to outcome-based programs
- From (lecture-based) teacher centred programs to (holistic task) learner centred programs
- From behaviouristic learning to constructivist learning
- From knowledge orientation to competency-based education.

Importance of complex behavioural skills

- If things go wrong in practice, these skills are often involved (Papadakis et al 2005; 2008; van Mook et al 2012)
- Success in labour market is associated with these skills (Meng 2006; Semeijn et al, 2006)
- Practice performance is related to school performance (Padakis et al 2004).

How do we learn a complex skill?

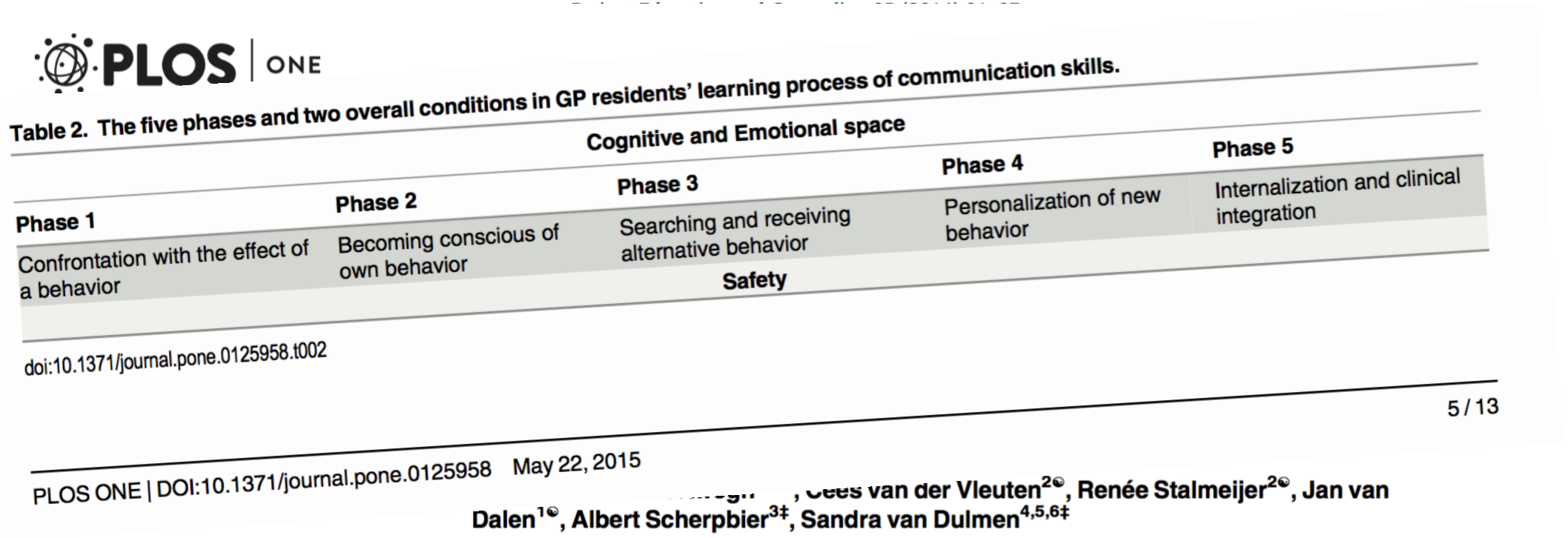

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Table 2. The five phases and two overall conditions in GP residents' learning process of communication skills.

Cognitive and Emotional space				
Phase 1	**Phase 2**	**Phase 3**	**Phase 4**	**Phase 5**
Confrontation with the effect of a behavior	Becoming conscious of own behavior	Searching and receiving alternative behavior	Personalization of new behavior	Internalization and clinical integration
Safety				

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Cees van der Vleuten[2☯], Renée Stalmeijer[2☯], Jan van Dalen[1☯], Albert Scherpbier[3‡], Sandra van Dulmen[4,5,6‡]

1 Skillslab, Maastricht University, Maastricht, the Netherlands, **2** Department of Educational Development and Research, Maastricht University, Maastricht, the Netherlands, **3** Faculty of Health, Medicine and Life Sciences, Maastricht University, Maastricht, the Netherlands, **4** NIVEL (Netherlands institute for health services research), Utrecht, the Netherlands, **5** Radboud University Medical Centre, Nijmegen, the Netherlands, **6** Buskerud and Vestfold University College, Drammen, Norway

☯ These authors contributed equally to this work.
‡These authors also contributed equally to this work.
* v.vdeertwegh@maastrichtuniversity.nl

or