

# Peer-assessment Positively Impacts Dental Students' Critical Reflection and Academic Achievements

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**The authors report no conflicts of interest**



# Background

- Reflection is a core critical competence (Mann et al., 2009; Lindström et al., 2011).
- It is the foundation of decisive learning (Amulya, 2004).
- Students' reflection can be fostered through *dialogic feedback*

(Kamp et al., 2013, Carless et al., 2010; Nicol and Macfarlane-Dick, 2006; Sadler, 1989).

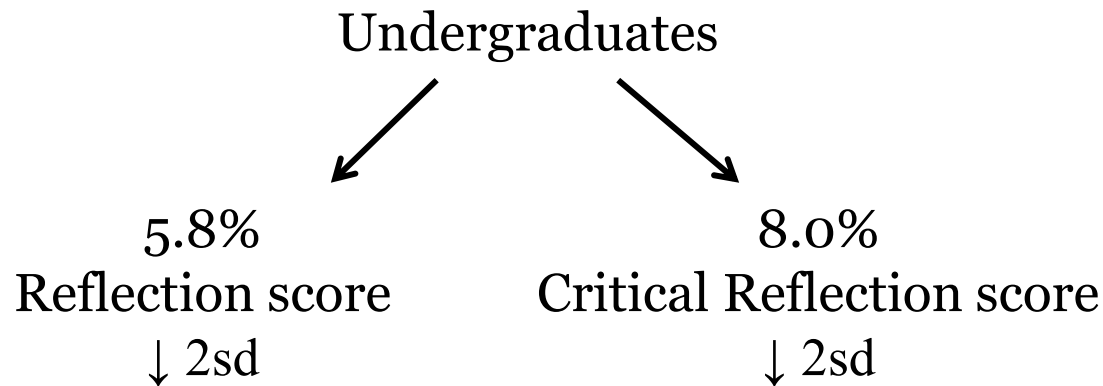
- However, the demands on the lecturer to support students' access to and engagement in feedback are 'huge' (Evans 2013).
- Self- and peer-assessment/feedback have been proposed for training students in reflection (Biggs and Tang, 2011; Dochy et al. 1999; Boud and Falchikov 2007).

# Aim

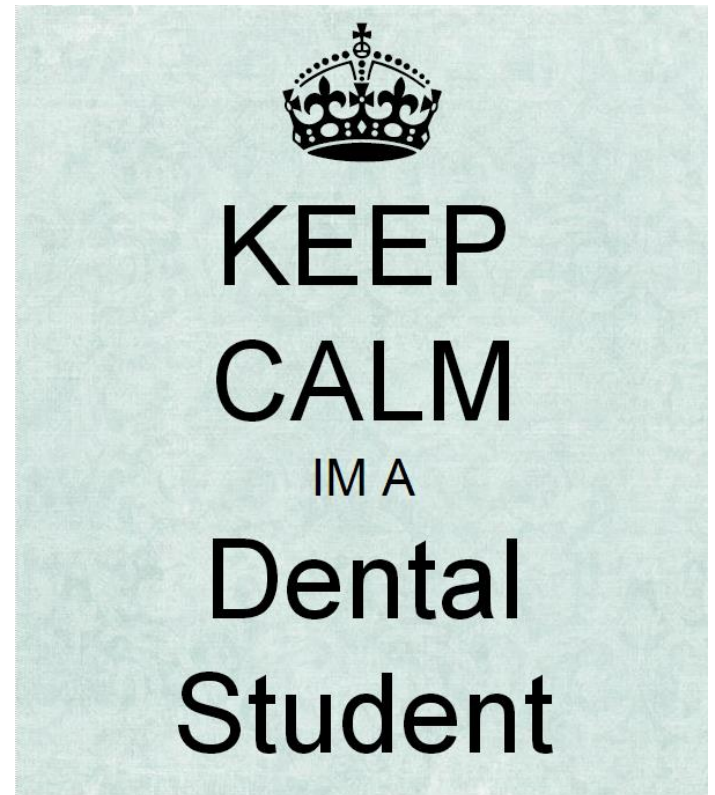
- To evaluate the academic and reflective thinking effects of a continuous, formative, structured peer-assessment protocol of clinical performance, as a framework for immediate dialogic peer-feedback of undergraduate dental students

Tricio J., Escudier M., Thomas M., Lewis-Greene H., Georghiou L., Andiappan M. & Woolford M. 2014 Dental Students Peer-assessment: A Prospective Pilot Study.  
Eur J Dent Educ (accepted for publication)

# Why?

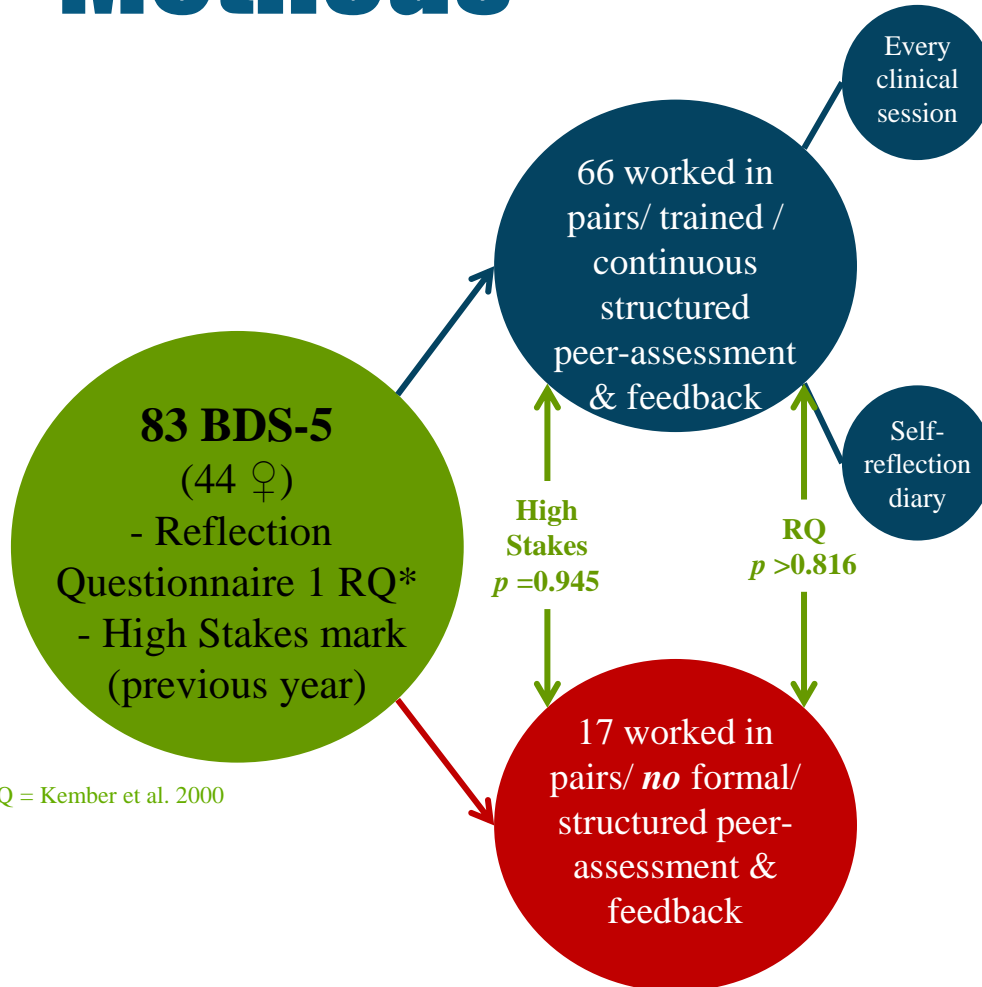


Tricio J., Woolford M., Escudier M. 2014 Dental Students' Reflective Habits:  
Is There a Relation with their Academic Achievements?  
Eur J Dent Educ (accepted for publication)



- Some individuals do not learn from experiences (Jarvis, 1987)
- Clinics are attended and then forgotten (Tsang and Walsh, 2010)
- A dangerous professional lacks the skills and insight necessary for self-assessment (Bing-You & Trowbridge 2009)

# Methods



\*RQ = Kember et al. 2000

KING'S College LONDON | KING'S MAIN SITE | INTERNAL | KEATS HOME | JORGE TRICIO PESCE (LOG OUT)

**KEATS (KING'S E-LEARNING AND TEACHING SERVICE)**

**Peer-Feedback diary**

These are your received feedback & agreed challenges/actions on 30/10/2012:

- Look at radiographs at the same time as clinical examination. Refer to radiographs earlier.
- Check assessment sheet to make sure haven't missed any area. e.g. oral hygiene.

These are your received feedback & agreed challenges/actions on 13/11/2012:

- Good time management and organisation of equipment.
- Getting accurate reading with apex locator. E.g. wash with sodium hypochlorite and try again and dry with paper points.

These are your received feedback & agreed challenges/actions on 15/11/2012:

- Good time management.
- Improve knowledge of protaper sequence.

These are your received feedback & agreed challenges/actions on 29/11/2012:

- Although not J... 's fault as patient attended late, she worked fast and efficiently.

practice to review these past comments and reflect on them as a way to overcome any difficulty in your learning process.

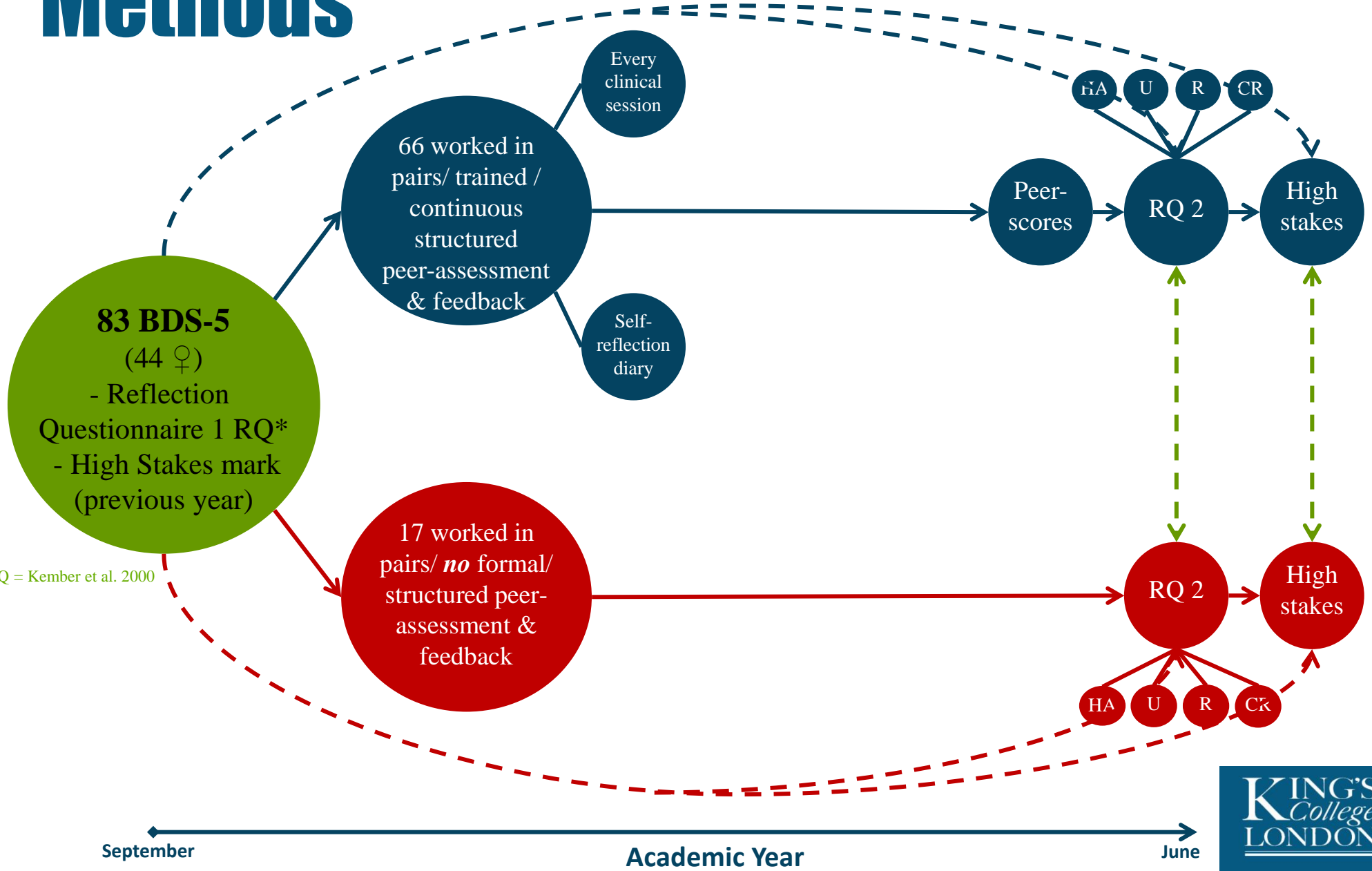
Peer-Feedback diary from your DOPS and Mini-CEX

Jump to...

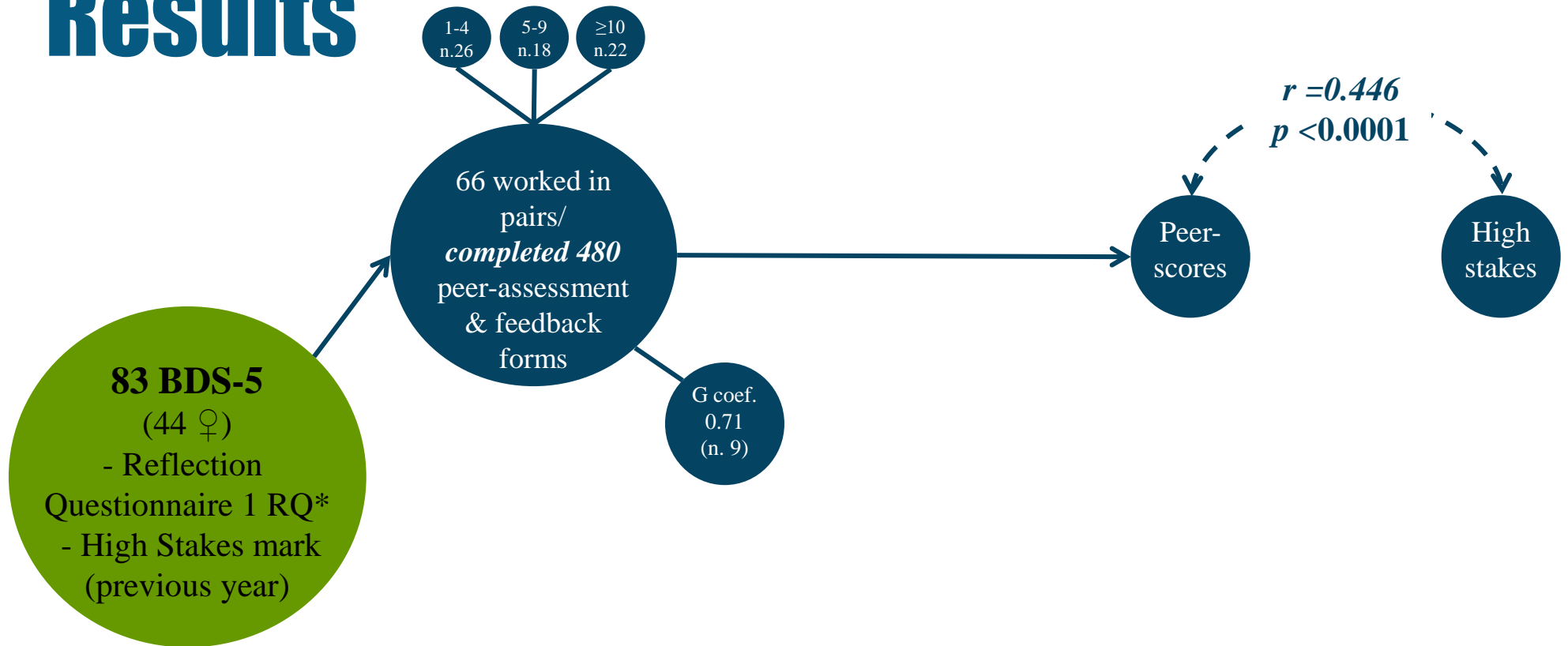
13	Does the trainee show insight into his/her performance? (Recognises personal strengths, weaknesses and deficiencies?)									
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# Methods

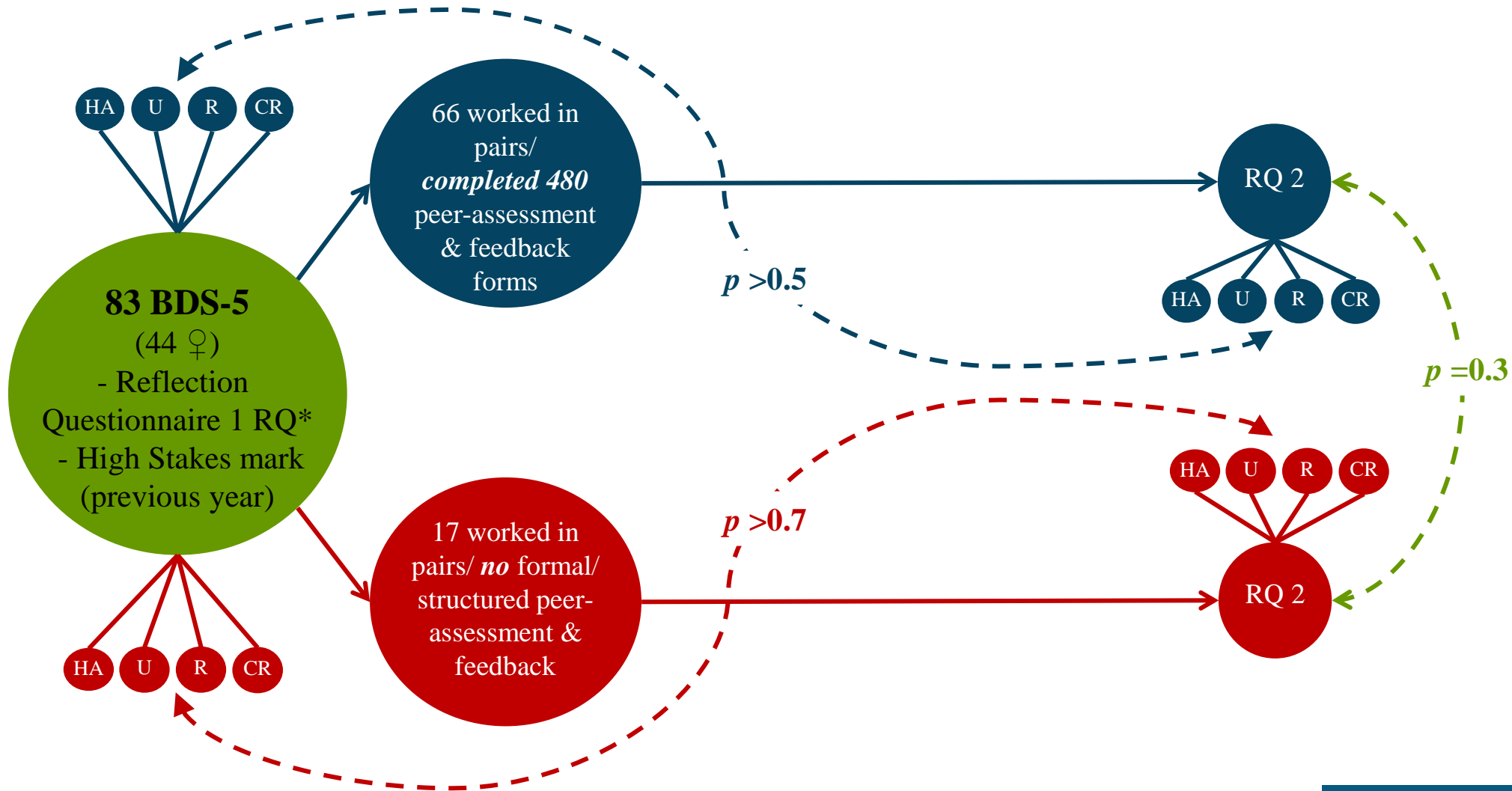


# Results



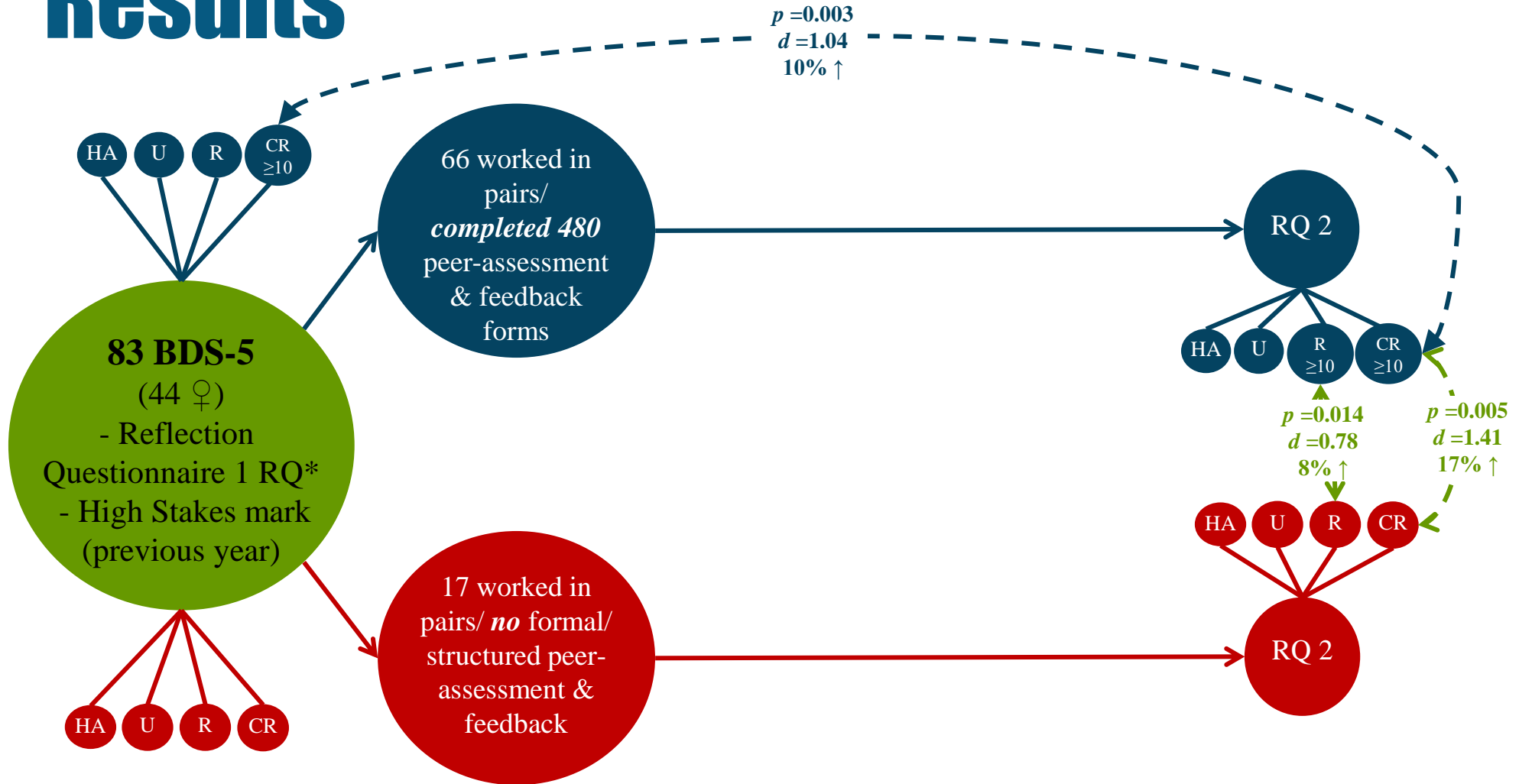
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# Results

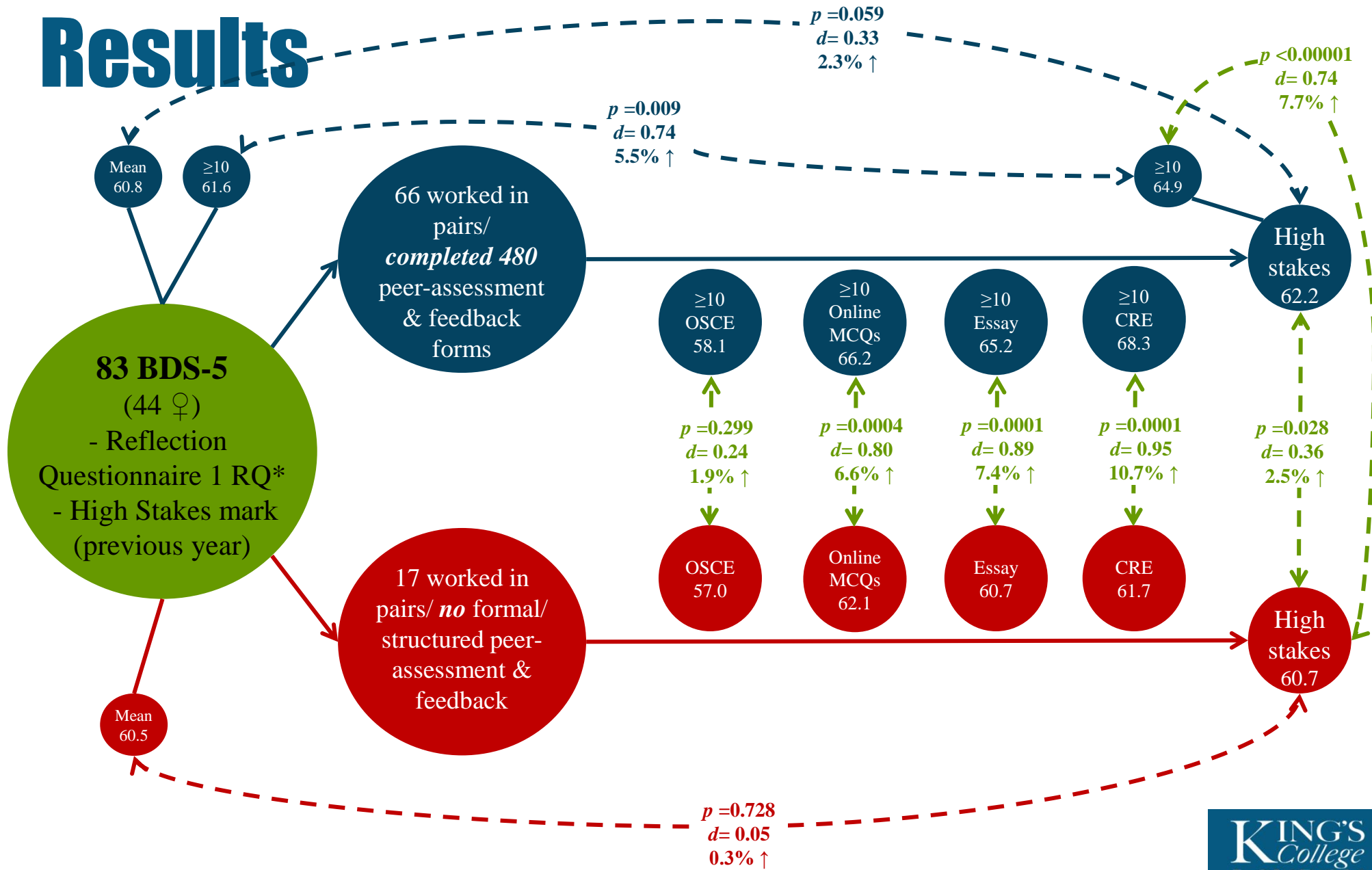




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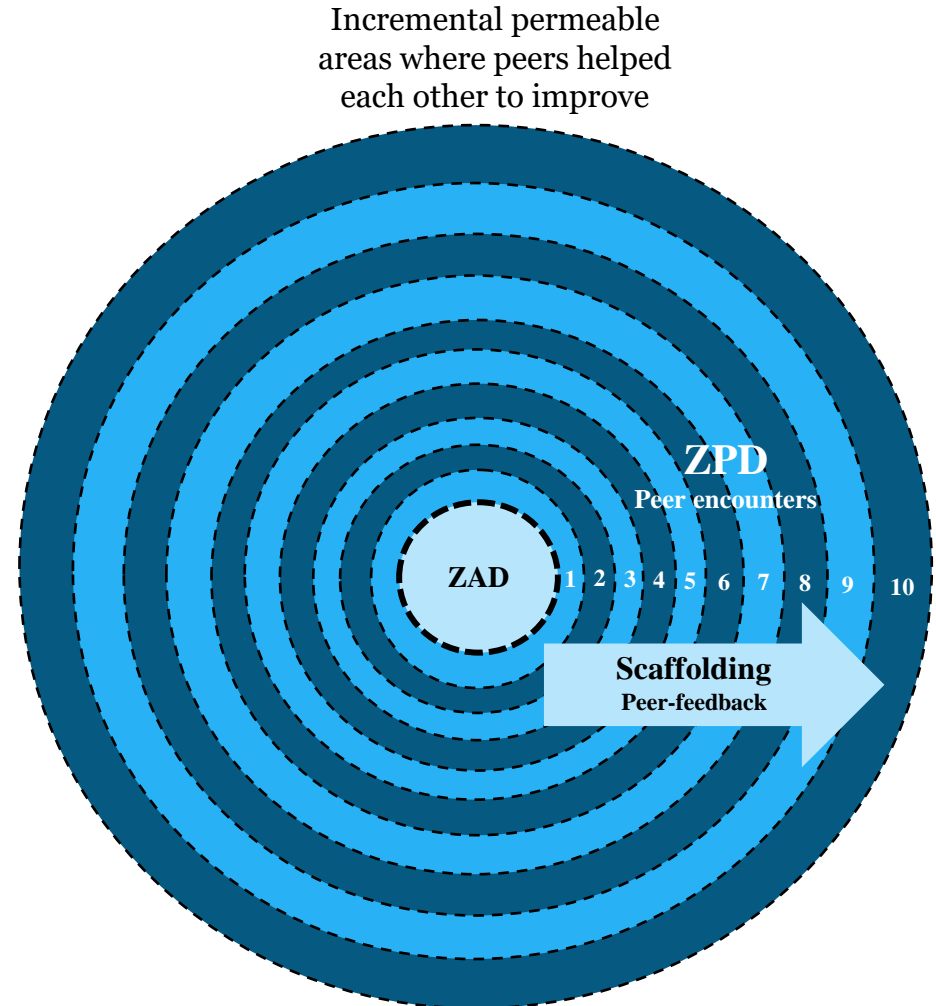
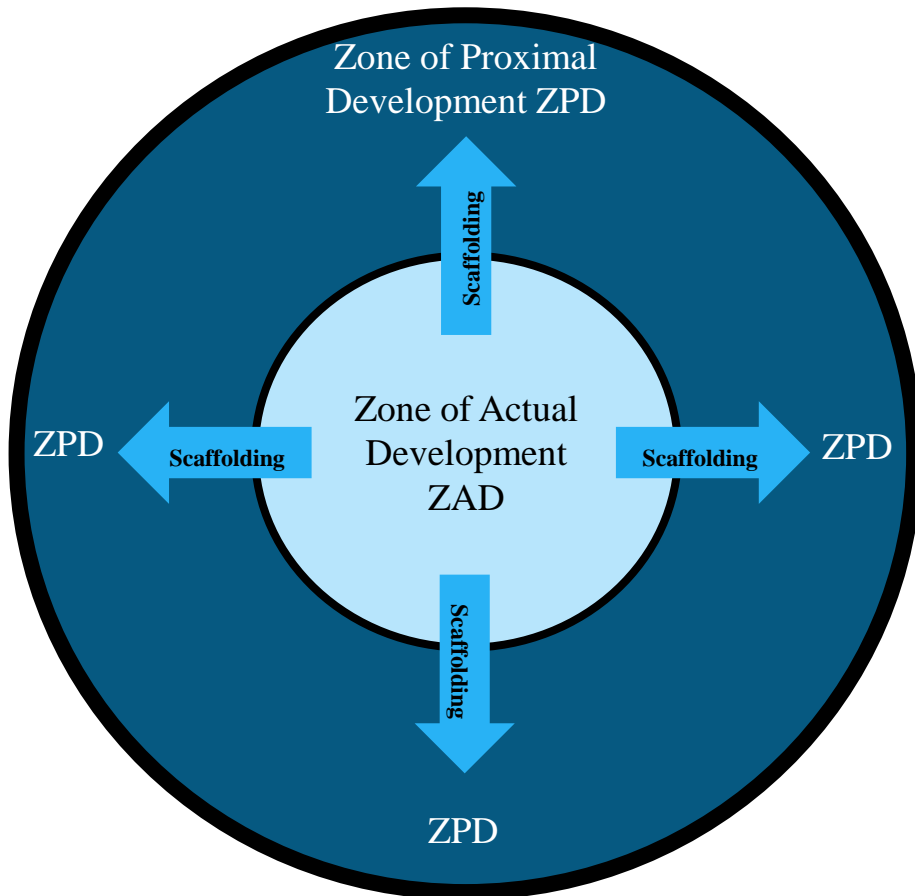


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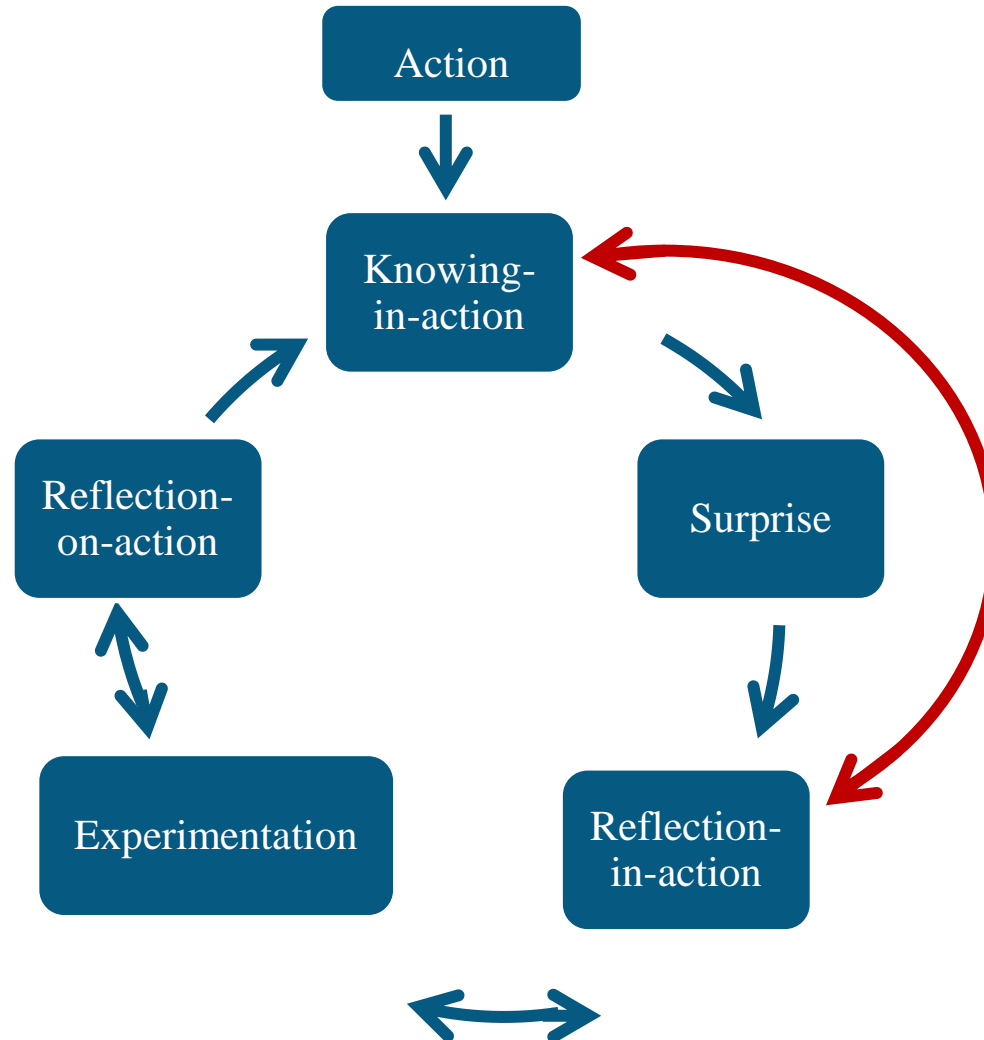
# Discussion

- Graphical interpretation of how Vygotsky (1978) Social Constructivist model could have worked in our peer-assessment protocol



# Discussion

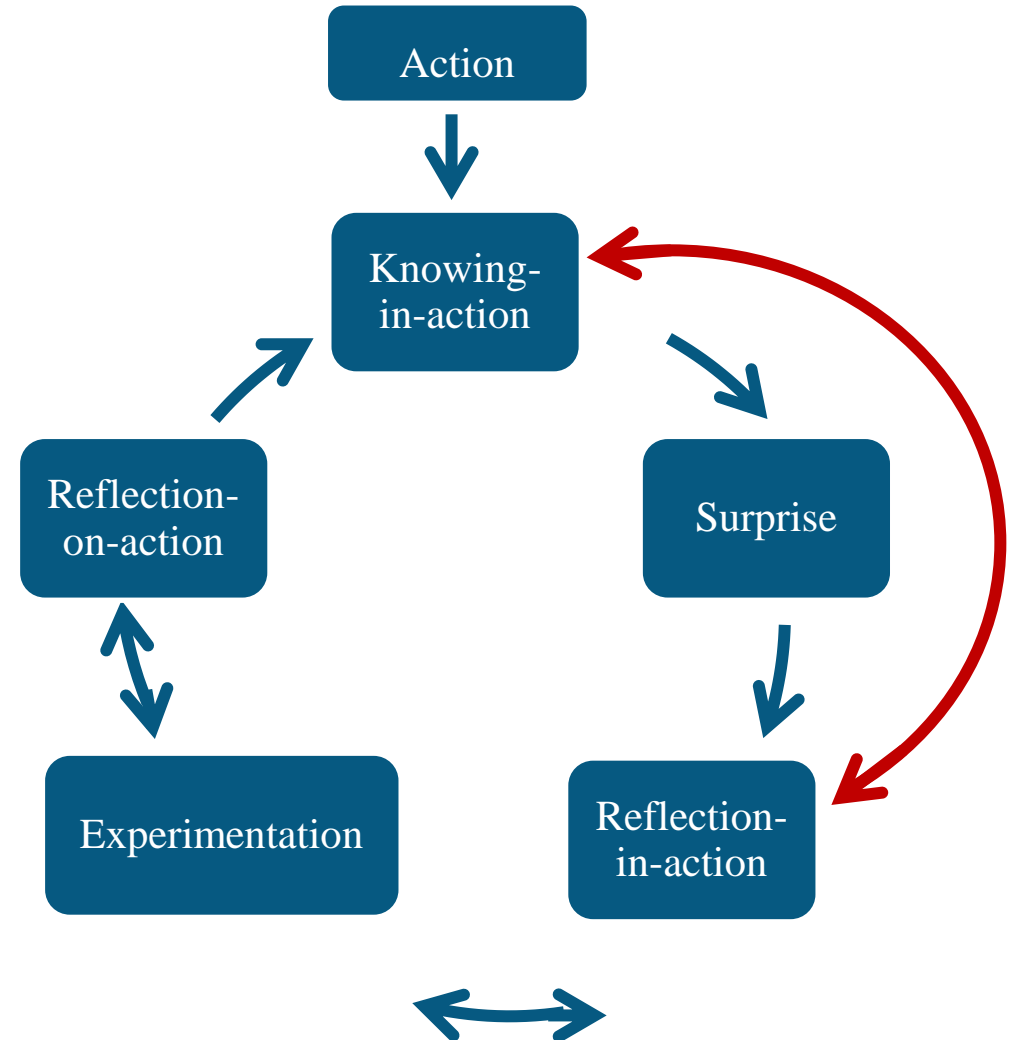
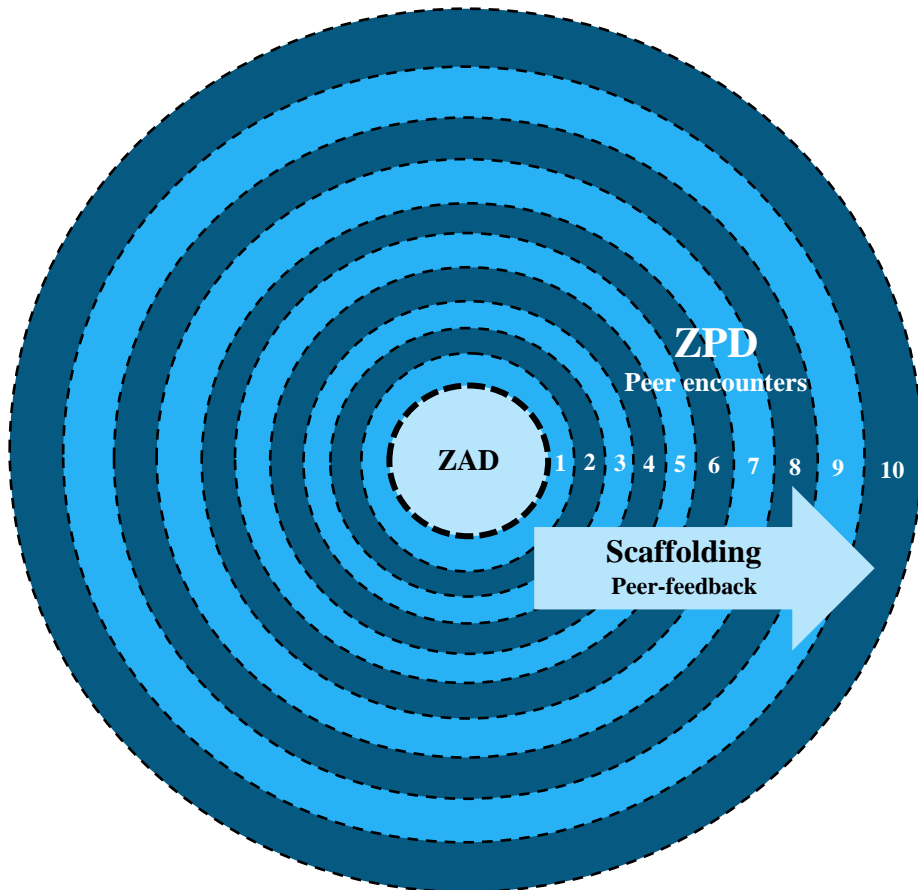
- Graphical interpretation of Schön (1983) model of Reflective Practice



Feedback loop works only if we have the capacity to reflect while performing. Facilitated by a “interventionist mentor”.

# Discussion

- Graphical interpretation of Social Constructivism (Vygotsky 1978) and Reflective Practice (Schön 1983) models working together



# Conclusions

- Structured formative peer-assessment and feedback of clinical performance can reliably help undergraduate dental students to improve their academic achievements and critical reflection skills.

## Requirements:

- Students are trained
- Performed continuously
- For at least  $\geq 10$  peer encounters
- Focused on constructive dialogic feedback (not monologue/scores)
- Feedback followed by self-reflection



# Thank You for Your Attention

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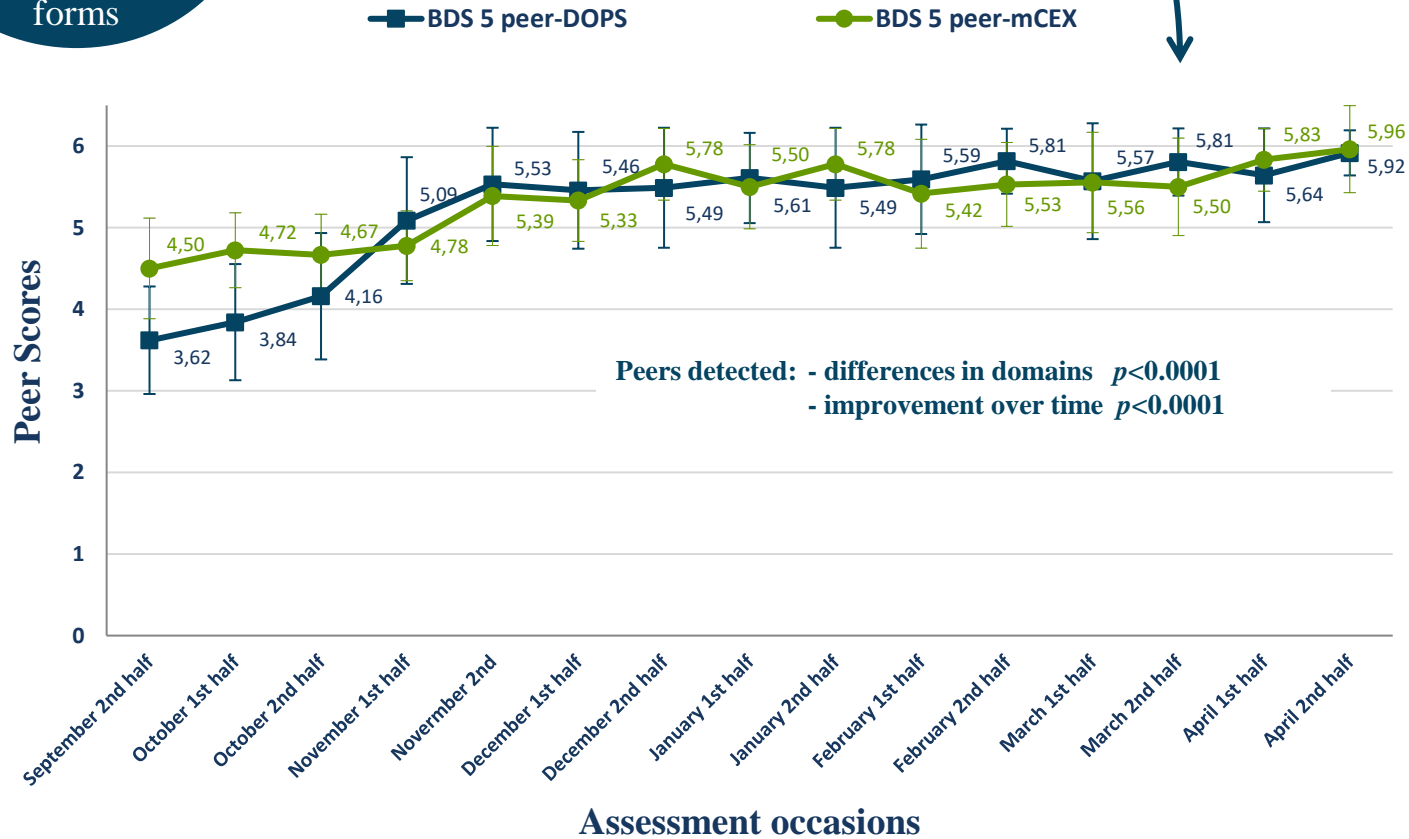
University of London

# Results

**83 BDS-5**  
(44 ♀)  
- High Stakes mark  
(previous year)  
- Reflection  
Questionnaire 1  
RQ\*

66 worked in  
pairs/  
*completed 480*  
peer-assessment  
& feedback  
forms

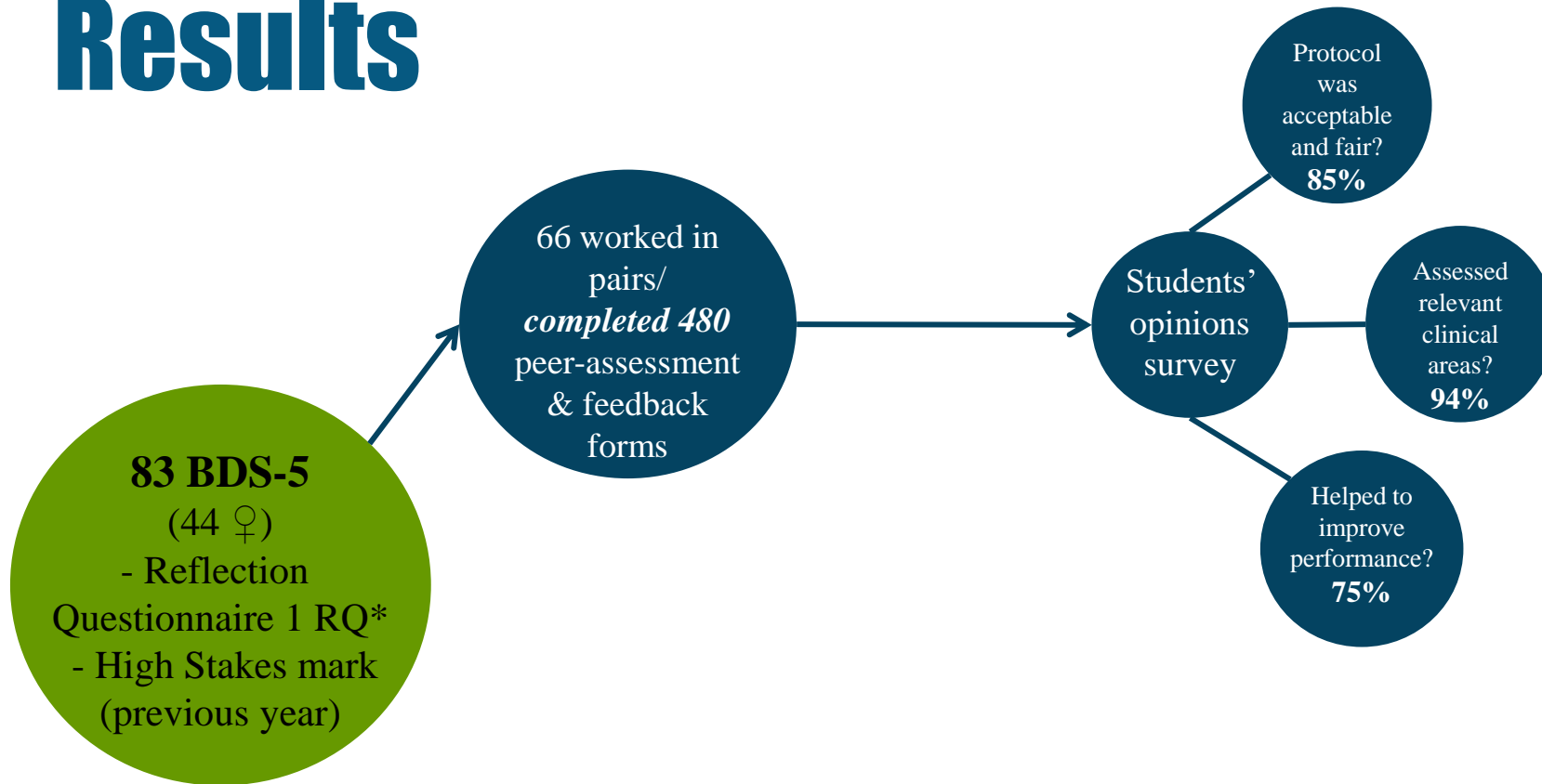
Peer-  
scores



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